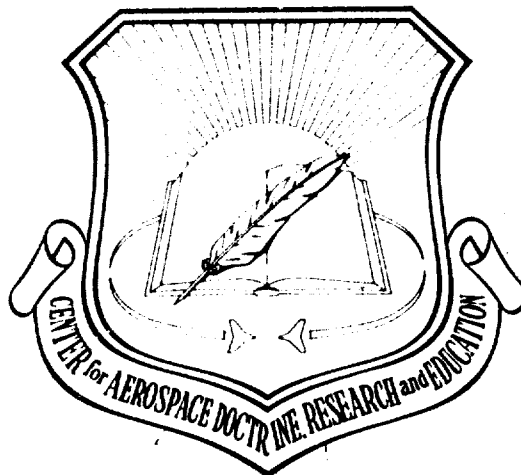


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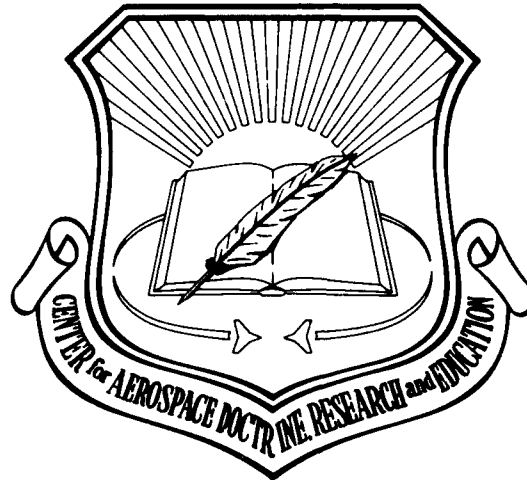
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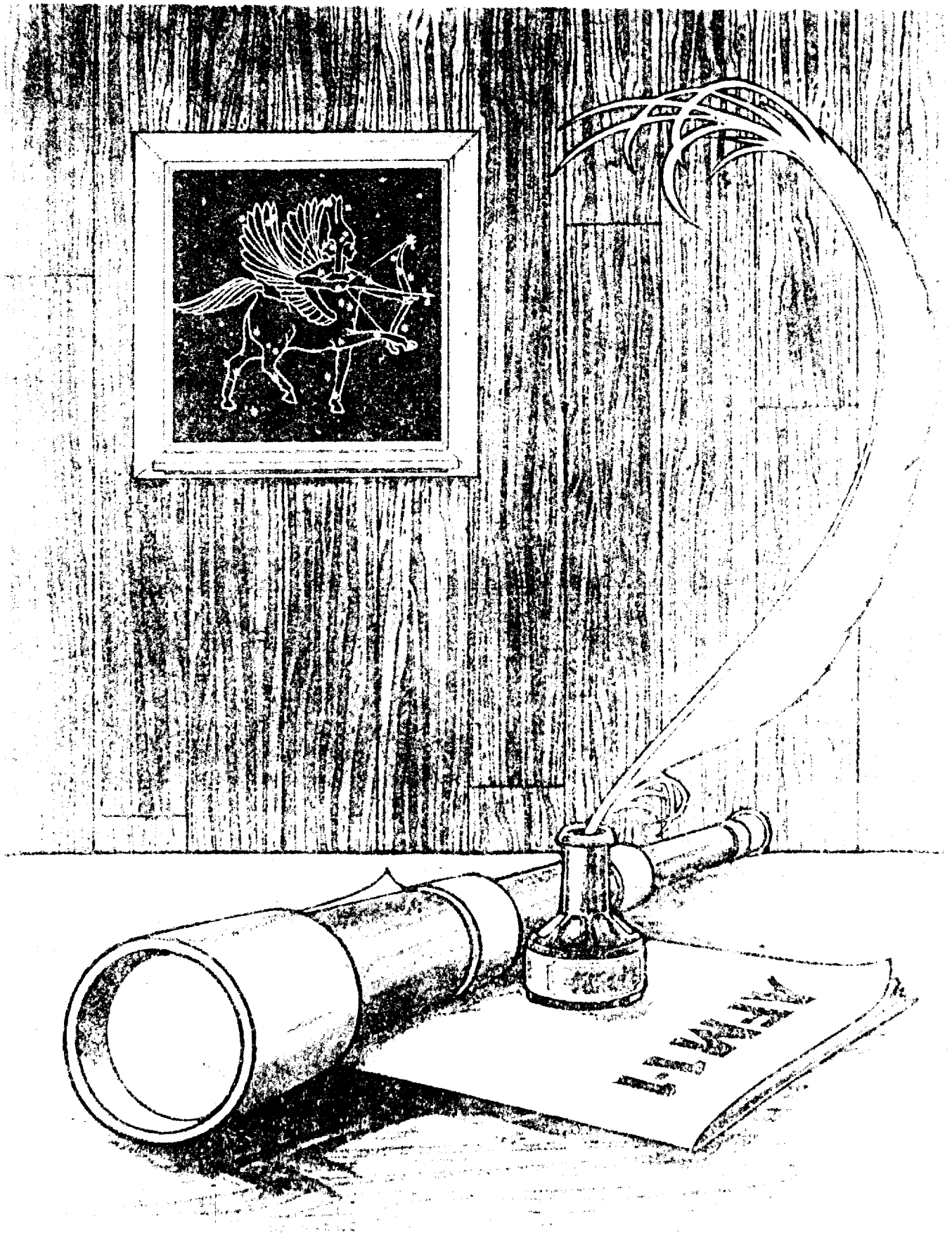
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Introducing Air University Press

Air University Press is the publishing arm of the Center for Aerospace Doctrine, Research, and Education (CADRE). The press produces books, monographs, and papers on subjects related to Air Force doctrine, strategy, and policies; roles and missions of air power; the employment of air power at all levels of conflict; the nature of future warfare and peace; military reform; resource utilization; and personnel and training. These publications are the results of unique research by military authors and civilian scholars in the Airpower Research Institute and other Air University agencies. They form a significant body of literature that fosters the development of improved understanding about the nature of air power, warfare, and national security. Most of the studies are not duplicated in academe or any of the other senior service schools. The publications program of CADRE and the Air University Press is crucial to the exchange of ideas within the Air Force and the Department of Defense and to the cross flow of critical thinking between the military and civilian communities.

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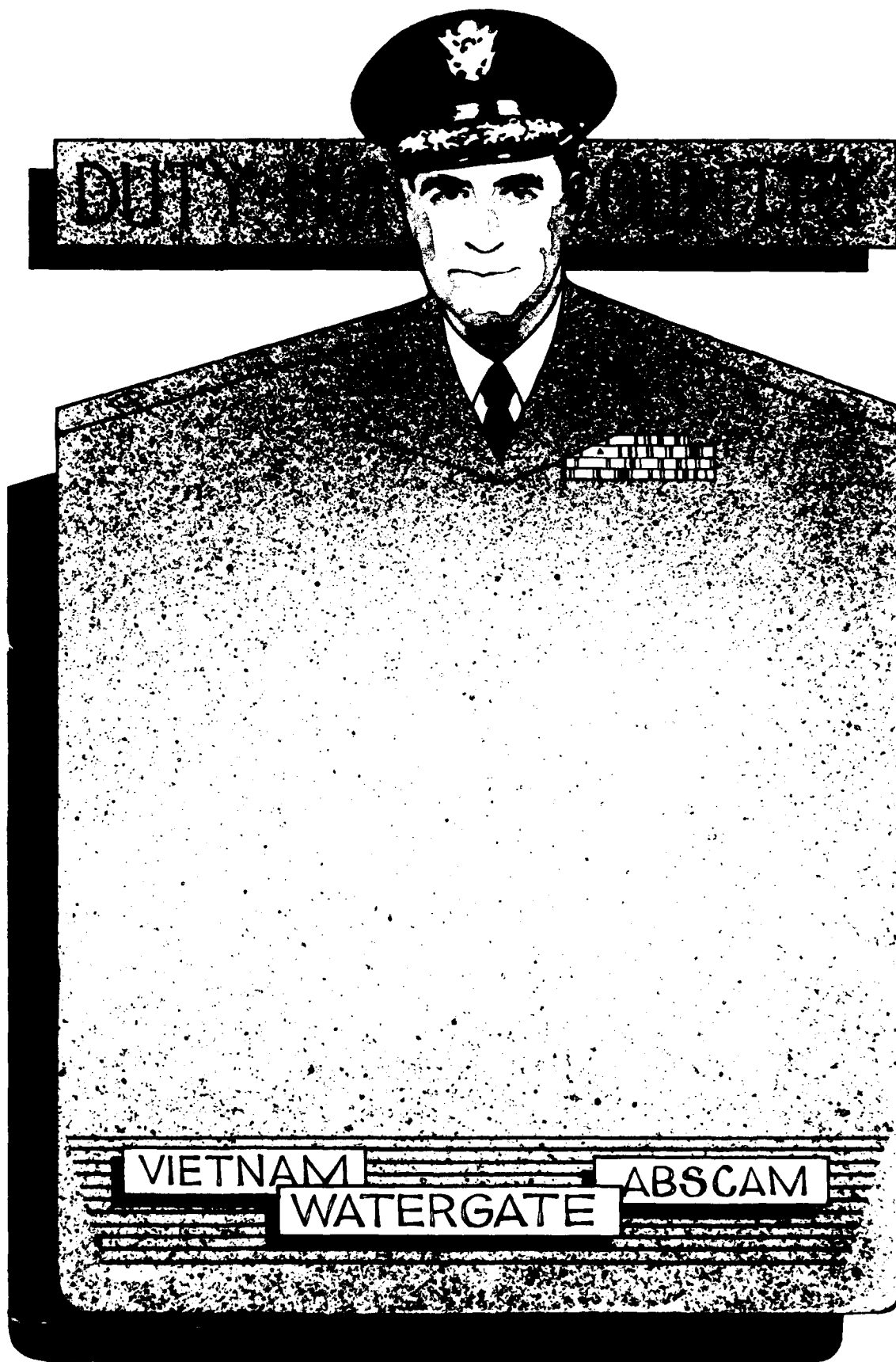


Contents

5	New and Forthcoming Listings
5	Books
7	Unclassified Reports
9	Previous Listings
9	Books
21	CADRE Papers
25	CADRE Papers Special Series
31	Unclassified Reports
47	Author Index
51	Title Index
56	Ordering Air University Press Publications
57	Order Form
58	Customer Survey
59	Change of Address Notice
61	Change of Address Form

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New and Forthcoming Listings

Books

B-45

Conflict, Culture, and History: Regional Dimensions

Dr Stephen J. Blank et al.

Five specialists examine the historical relationship of culture and conflict in various regional societies. The authors use Adda B. Bozeman's theories on conflict and culture as the basis for their analyses of the causes, nature, and conduct of war and conflict in the Soviet Union, the Middle East, Sinic Asia (China, Japan, and Vietnam), Latin America, and Africa. Drs Blank, Lawrence E. Grinter, Karl P. Magyar, Lewis B. Ware, and Bynum E. Weathers conclude that non-Western cultures and societies do not reject war but look at violence and conflict as a normal and legitimate aspect of sociopolitical behavior.

1992. Public release.

B-47

Airland Combat: An Organization for Joint Warfare

Col Thomas A. Cardwell III, USAF

The author traces the development of airland combat strategy from the World War II era through the Korean and the Vietnam wars and outlines current thinking about unified command structure. Colonel Cardwell analyzes Army AirLand Battle doctrine, Air Force doctrine on tactical air operations, naval doctrine for supporting land warfare, and joint doctrine for unified operations. He examines the process for working joint issues and proposes a joint organization for airland combat.

1992. 289 pages. Public release.

Airpower Journal Index: 1987-1991

Lt Col Michael A. Kirtland, USAF, editor

A comprehensive index of the *Airpower Journal* with separate author, title, and subject indexes. The subject index is cross-referenced and chronologically ordered for ease of reference.

1992. 76 pages. Public release.

B-46

Joint Training for Night Air Warfare

Lt Col Brian W. McLean, USAF

This book briefly examines the history of joint air operations and some night air operations from World War II through Operation Desert Storm. Colonel McLean focuses on the need for increased training for joint operations at night. He describes a hypothetical contingency in Korea to illustrate some of the challenges of conducting joint night operations. He offers recommendations for a building-block approach to improve training in our joint night air warfare capability.

This book is the 1991 winner of the Air Force Historical Foundation's Col James Cannell Memorial Award.

1992. 122 pages. Public release.

B-48

The Future of Air Power in the Aftermath of the Gulf War

Dr Richard H. Shultz, Jr.

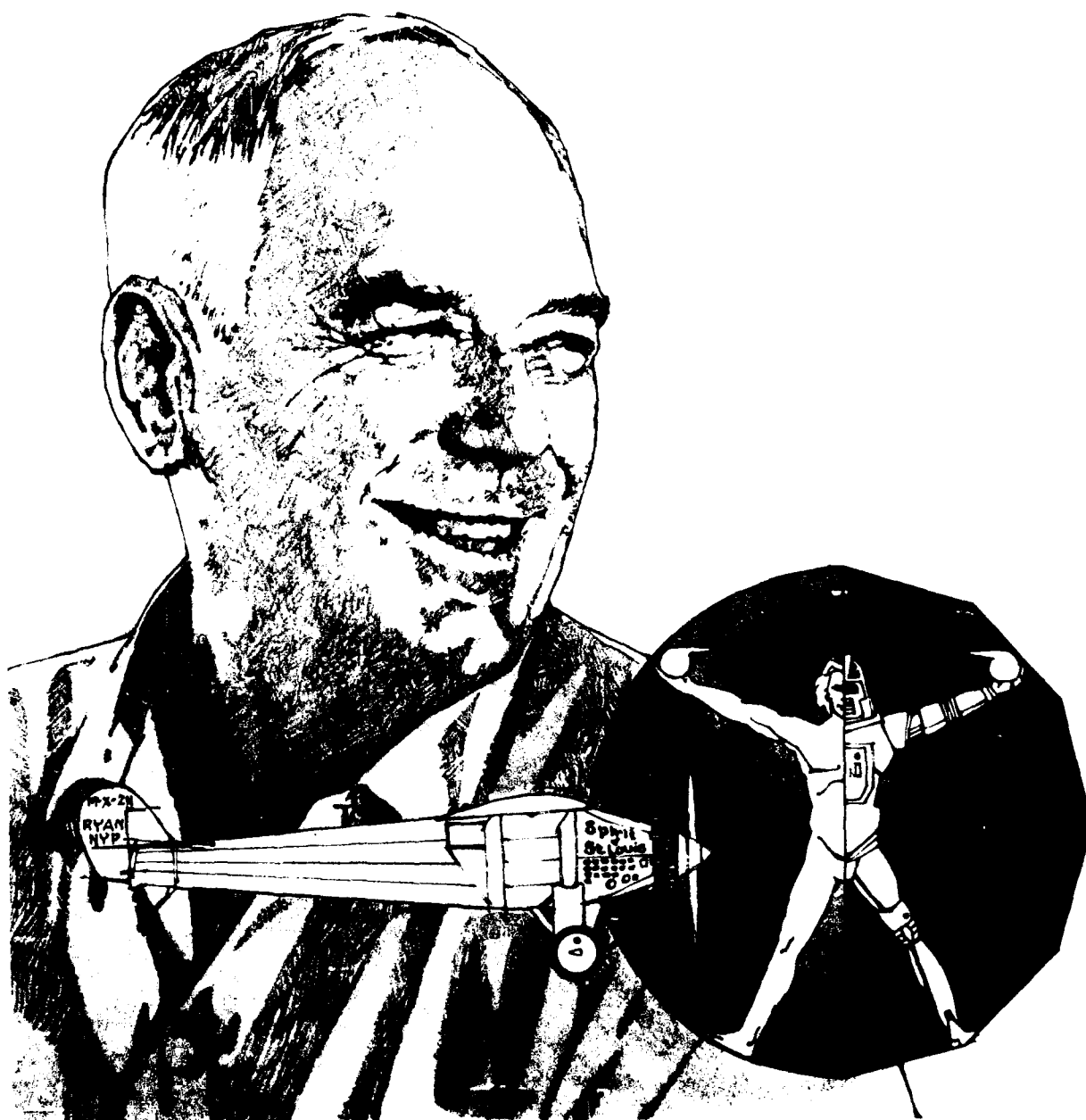
Dr Robert L. Pfaltzgraff, Jr.

This collection of essays reflects the proceedings of a 1991 conference on "The United States Air Force: Aerospace Challenges and

Missions in the 1990s," sponsored by the USAF and Tufts University. The 20 contributors comment on the pivotal role of air power in the war with Iraq and address issues and choices facing the USAF, such as the factors that are reshaping strategies and missions, the future role and structure of air power as an element of US power projection, and the aerospace industry's views on what the Air Force of the future will set as its acquisition priorities and strategies. The

authors agree that aerospace forces will be an essential and formidable tool in US security policies into the next century. The contributors include academics, high-level military leaders, government officials, journalists, and top executives from aerospace and defense contractors.

1992. 386 pages. Public release.



Unclassified Reports

R-78

Tailoring the Tactical Air Control System for Contingencies

Lt Col Robert J. Blunden, Jr., USAF

Colonel Blunden points out that the contingency operations of the future require a tailored tactical air control system (TACS). He formulates seven principles for modifying the Tactical Air Command's (TAC) existing TACS—understand the objective of the operation; analyze the scope of the contingency; determine command, control, and communications functions; analyze the operating environment; maintain security; select the most capable resources for deployment and provide maximum support; and review for suitability, feasibility, acceptability, simplicity, and flexibility. Colonel Blunden's recommendation for TAC to incorporate these principles, applicable scenarios, and doctrinal guidance in its 55-series regulations gives planners a decisive advantage in future requirements of small-scale contingencies.

1992. 74 pages. Public release

R-79

Unit-Level Automation for Air Force Contingency Operations in Low-Intensity Conflict

Maj Mark A. Cochran, USAF

Pointing to the advantages of using small-computer technology in the US Air Force—most recently in the Persian Gulf—Major Cochran proposes that the service use small computers to support units involved in contingency operations in low-intensity conflict (LIC). He cites their proven capability in providing automated support at the unit level and maintains that they could be equally effective in the support-limited LIC arena, an area in which the US military is quite likely to be involved in the future. Despite the vast potential of small computers for supporting LIC operations, Major Cochran warns that the Air Force must be careful to coordinate their mission-related use across functional areas to assure the effective employment of units that depend on these machines.

1992. 76 pages. Public release.

R-80

Principles of Information Resource Management: A Foundation for the Future

Maj Paul D. Condit, USAF

Major Condit focuses on the effective integration of total quality management (TQM) plan, which provides the nucleus for the Department of Defense (DOD) information resource management (IRM) philosophy. He identifies the principles of TQM and delineates the main tenets of IRM as centralized control/decentralized execution, enterprise data standards, information systems evolution, open systems, and the information-integrated workplace. Major Condit recommends joint TQM and IRM activities throughout DOD.

1992. 116 pages. Public release.

R-84

Special Operations: Joint Training

Lt Col Thierry G. Curtis, USAF

This study establishes the need for improvements in joint special operations training—special operations forces must train the way they will fight. Colonel Curtis examines the near future of military operations and the potential for joint special operations at the lower end of the operational continuum. He reviews the effectiveness of joint training in earlier operations in such contingencies and uses a realistic direct-action scenario to identify specific weak areas in joint training. Colonel Curtis combines the historical and hypothetical lessons learned to recommend changes in joint special operations training.

1992. 98 pages. Public release.

R-81

When It's Over "Over There": Deep-Strike Air-to-Ground Training for the 2000s

Maj Jonathan C. Noetzel, USAF

Major Noetzel focuses on the need for training in environments that will duplicate probable conditions of future military actions. He iden-

titles geographic training areas and examines them for similarities and differences with likely trouble spots around the world. Only by periodic training in these differing climates will flight and support crews be ready to go when called. Major Noetzel makes specific recommendations to achieve this readiness training.

1992. 52 pages. Public release.

R-82

Total Quality Management: Good Enough for Government Work

Lt Col Michael J. Prowse, USAF

Colonel Prowse furnishes commanders, leaders, and managers with advice, concepts, methods, educational resources, and a common frame of reference for attaining a total quality (TQ) organizational culture. He provides a comprehensive view of total quality: background, key concepts, principles, vision, management, internal and external customers, analysis, suppliers, process, measurement, tools, continuous improvement, and direction/feedback.

1992. 246 pages. Public release.

R-83

The Conventional Bomber Force War-Horses for Global Conflicts

Lt Col V. Frank Vollmar, USAF

Colonel Vollmar questions whether the current conventional bomber force is adequately organized, equipped, and modernized to meet basic security needs and project power in the post-cold-war era. He assesses the use of the conventional bomber in several conflicts and exercises and analyzes the capabilities of this force (B-52s, B-1s, and B-2s). He concludes that the present conventional bomber force is powerful but requires modifications to keep pace with world political changes. Colonel Vollmar offers recommendations and solutions to increase the bombers' capabilities in conventional warfare.

1992. 112 pages. Public release.



Previous Listings

Books

B-25

The Role of Airpower in the Iran-Iraq War

Maj Ronald E. Bergquist, USAF

This book examines the air war between Iran and Iraq. Rather than simply describing what happened in the war, it attempts to discern why Iran and Iraq used their air power as they did. It shows how the combatants value air power, what aspects of air power appear most important to Iranian and Iraqi national leaders, and how their values and needs led them to use air power in ways quite apart from Western professional expectations. The results highlight considerations that affect the use of air power by third-world nations.

1988. 108 pages. Public release.

B-38

Responding to Low-Intensity Conflict Challenges

Dr Stephen Blank et al.

The authors examine doctrines, strategies, and force structures that third-world countries have employed to answer the challenge of low-intensity conflicts. They attempt to synthesize these experiences into considerations that US policymakers should weigh carefully in facing future third-world conflicts. This book is a follow-on volume to *Low-Intensity Conflict in the Third World* (1988) by Dr Lewis Ware et al.

1991. 332 pages. Public release.

GPO-008-070-00656-1,

\$14.00.

B-9

Command Structure for Theater Warfare—The Quest for Unity of Command

Col Thomas A. Cardwell III, USAF

The author discusses how the US and allied military establishments experimented with command structures in World War II, Korea, and Vietnam. He describes the outcomes of these experiments and examines the evident pitfalls that the US should avoid in future conflicts. Colonel Cardwell proposes a command structure for theater warfare based on historical experience, individual service doctrines, and combined doctrine.

1984. 215 pages. Public release.

B-41

Professional Military Education for Air Force Officers: Comments and Criticisms

Lt Col Richard L. Davis, USAF

Lt Col Frank P. Donnini, USAF

This book surveys the many evaluations made between 1946 and 1987 of the Air University's attempts to provide effective professional military education (PME) for US Air Force officers. Colonels Davis and Donnini discuss the purpose of PME from a USAF perspective and trace the evolution of Air Force PME and the curricula of the AU schools. The authors also offer observations about the education of officers, particularly with regard to commentary that has gradually evolved and may be styled a "doctrine" of PME.

1991. 136 pages. Public release.

B-16

The Air Force Role in Low-Intensity Conflict

Lt Col David J. Dean, USAF

Colonel Dean examines the increasing importance of third-world countries in global affairs. Their vital natural resources and geostrategic locations make them the object of intense competition between the superpowers and a ripe target for a new category of conflict. Because of the high probability of US involvement in third-world conflicts, we must adapt our resources to acquire the flexibility demanded by low-intensity conflict.

1986. 143 pages. Public release.

B-2

Low-Intensity Conflict and Modern Technology

Lt Col David J. Dean, USAF, editor

In this collection of essays, an international group of military and civilian scholars addresses the technological, policy, and doctrinal considerations that policymakers must struggle with in adopting strategies for coping with low-intensity conflicts. Foreword by Rep Newt Gingrich (R-Ga.).

1986. 395 pages. Public release.

GPO-008-070-00576-0.

\$14.00.

B-44

Women and Military Service: A History, Analysis, and Overview of Key Issues

Dr M. C. Devilbiss

Dr Devilbiss identifies and examines key events, questions, and policies pertaining to women in the US armed forces. She explores three major questions concerning the roles of women in the military: What has been the policy on this issue? Why and how have policy changes occurred? And what concerns and issues remain on the policy agenda?

1990. 102 pages. Public release.

B-39

ANZUS in Revision: Changing Defense Features of Australia and New Zealand in the Mid-1980s

Lt Col Frank P. Donnini, USAF

Colonel Donnini provides analysis and commentary on the demise of the ANZUS alliance and on shifts in Australian and New Zealand defense features. He addresses many questions and issues dealing with changing the political situation and the impact of those changes on defense and security conditions in the South and Southwest Pacific regions.

1991. 219 pages. Public release.

B-5

Nuclear Winter and National Security: Implications for Future Policy

Col Dennis M. Drew, USAF, et al.

This group of military and civilian scholars addresses the possible impact of "nuclear winter" on a variety of defense issues including deterrence strategies, domestic and international political affairs, military strategies and force structures, arms control and disarmament, and nuclear proliferation.

1986. 76 pages. Public release.

B-23

Making Strategy: An Introduction to National Security Processes and Problems

Col Dennis M. Drew, USAF

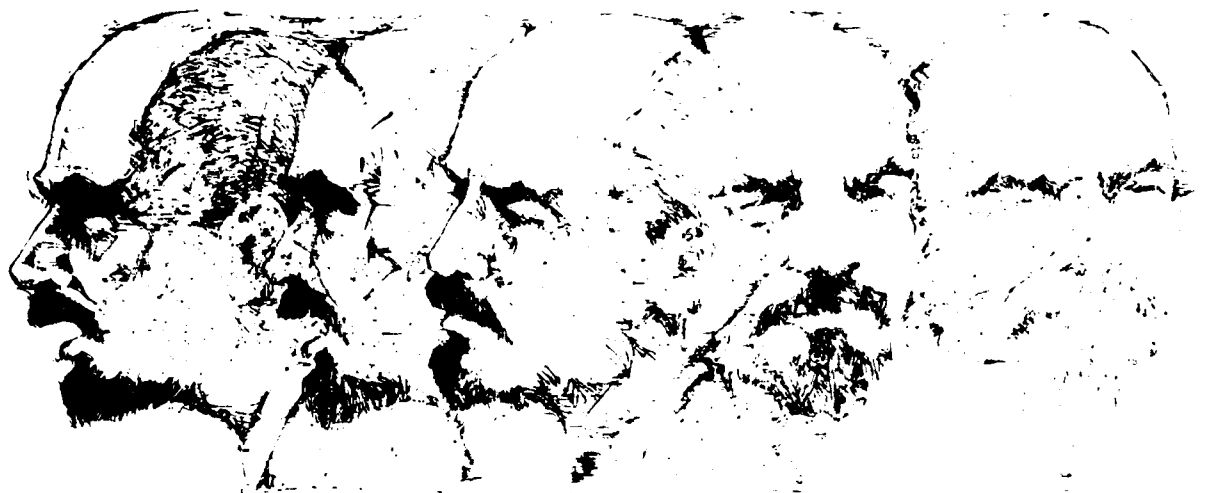
Dr Donald M. Snow

The authors analyze the evolution of strategy and the process by which strategy is devised. This book is descriptive rather than prescriptive in nature. In contrast to authors who offer advice and counsel concerning how to make strategy decisions, Dr Snow and Colonel Drew concentrate on what decisions military and political leaders must make. The authors examine the various military and political factors that influence those decisions.

1988. 229 pages. Public release.

GPO-008-070-00617-1.

\$10.00.



B-27

The Eagle's Talons: The American Experience at War

Col Dennis M. Drew, USAF
Dr Donald M. Snow

This volume surveys the American experience in war with emphasis on the complex interactions between political and military affairs. Colonel Drew and Dr Snow provide a key to understanding how and why the United States might employ its military power in the future.

1988. 445 pages. Public release.

B-29

Legitimate Use of Military Force against State-Sponsored International Terrorism

Lt Col Richard J. Erickson, USAF

Colonel Erickson presents an overview of how states can use international law to manage international terrorism. He analyzes the standing of international terrorists under international law, outlines the legal responsibilities that states have for controlling terrorists, and identifies the conditions under which states could use military force against international terrorism.

This book is the 1987 winner of the Air Force Historical Foundation's Col James Cannell Memorial Award.

1989. 459 pages. Public release.

B-31

Ideas, Concepts, Doctrine: Basic Thinking in the United States Air Force, 1907-1960, Volume I

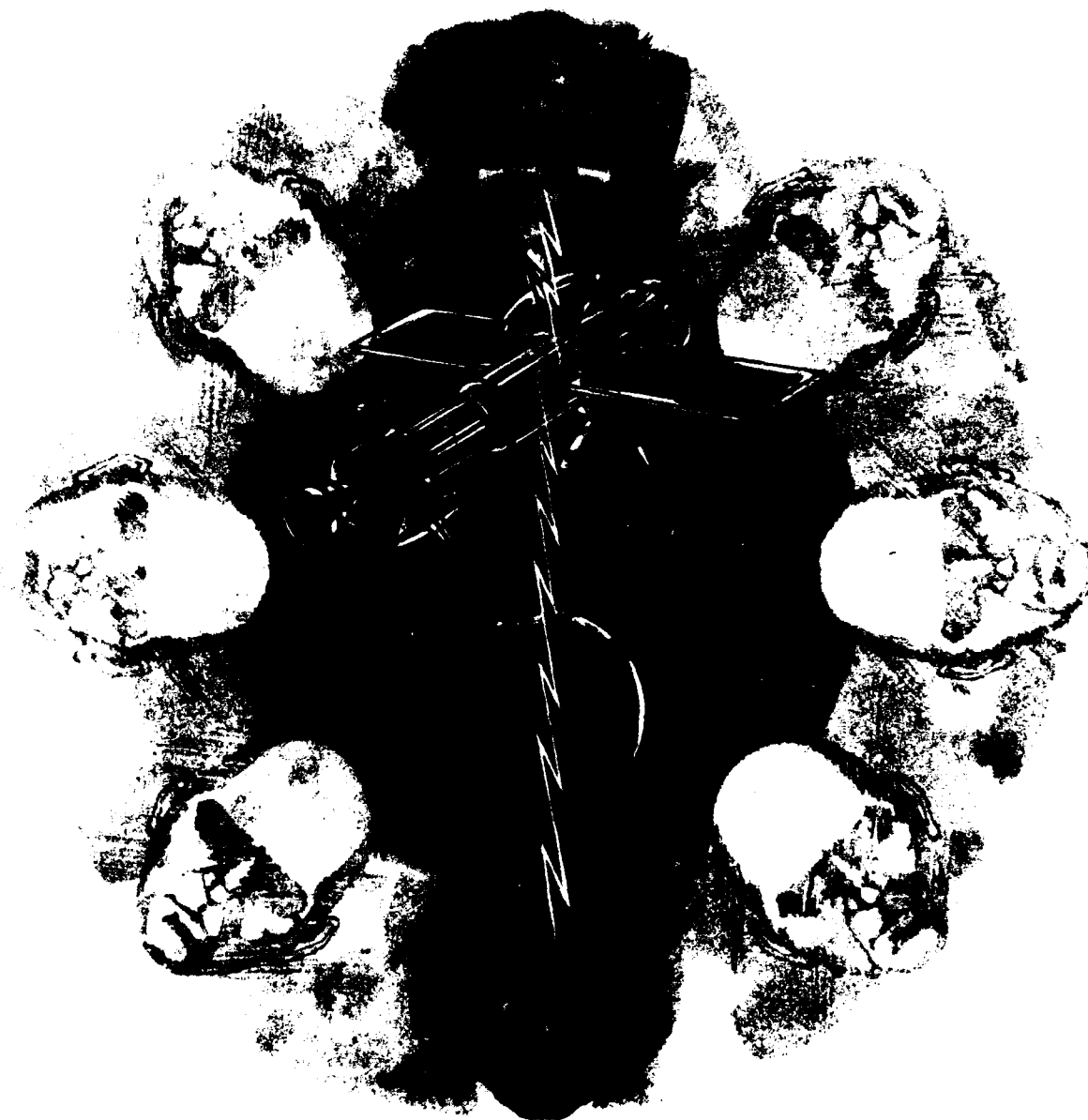
Dr Robert Frank Futrell

In this first volume of a two-volume study, Dr Futrell presents a chronological survey of the development of Air Force doctrine and thinking from the beginnings of powered flight to the onset of the space age. He outlines the struggle of early aviation enthusiasts to gain acceptance of the airplane as a weapon and win combat-arm status for the Army Air Service (later the Army Air Corps and Army Air Force). He surveys the development of air power doctrine during the 1930s and World War II and outlines the emergence of the autonomous US Air Force in the postwar period. Futrell brings this first volume to a close with discussions of the changes in Air Force thinking and doctrine necessitated by the emergence of the intercontinental missile, the beginnings of space exploration and weapon systems, and the growing threat of limited conflicts resulting from the Communist challenge of wars of liberation.

1989. 683 pages. Public release.

GPO-008-070-00638-5,

\$31.00.



B-32

**Ideas, Concepts, Doctrine: Basic
Thinking in the United States
Air Force, 1961-1984, Volume II**

Dr Robert Frank Futrell

This volume traces the new directions that Air Force strategy, policies, and thinking took during the Kennedy administration, the Vietnam War, and the post-Vietnam period. Futrell outlines how the Air Force struggled with President Kennedy's redefinition of na-

tional security policy and Robert S. McNamara's managerial style as secretary of defense. He describes how the Air Force argued that air power should be used during the war in Southeast Asia. He chronicles the evolution of doctrine and organization regarding strategic, tactical, and airlift capabilities and the impact that the aerospace environment and technology had on Air Force thinking and doctrine.

1989. 803 pages. Public release.

GPO-008-070-00638-3.

\$37.00.

B-14

The Chinese Communist Armed Forces

Dr Paul H. B. Godwin

This volume traces the development of the Chinese People's Liberation Army. The author's primary purpose is to provide the historical background required to understand why the Chinese military establishment approaches its current problems as it does. The book's primary emphasis is on issues of weapons and equipment modernization, force structure, command and control, and the development of doctrine and strategy.

1988. 170 pages. Public release.

GPO-008-070-00606-5,

\$8.50.

B-37

Bear Tracks in Indochina: An Analysis of Soviet Presence in Vietnam

Lt Col Dion W. Johnson, USAF

Through an analysis of the military, political, and economic interests of the United States, Soviet Union, and the states of Southeast Asia, Colonel Johnson places the development of the Soviet presence at Cam Ranh Bay into perspective. By analyzing the development and potential growth of Soviet military power in Southeast Asia, the author contributes to the overall analysis of threats and opportunities in Asia.

1990 (revised edition). 114 pages.
Public release.

GPO-008-070-00587-5,

\$4.75.

**Air University Review Index:
From 1 May 1947 through
January-March 1987**

Maj Michael A. Kirtland, USAF, editor

A comprehensive index of the 40 years of the Air Force's first professional journal, with separate author, title, and subject indexes. The subject index contains 146 cross-referenced

categories and is chronologically ordered for ease of reference.

1990. 439 pages. Public release.

B-33

Speaking Effectively: A Guide for Air Force Speakers

Dr John A. Kline

Dr Kline offers advice to help people develop the skills needed for speaking in public. The keys to being a good, confident speaker are prepare, organize, support, and deliver. He describes briefings, lectures, and speeches and discusses their differences. Dr Kline provides examples and pointers for both the novice and the skilled speaker.

1989. 86 pages. Public release.

GPO-008-070-00640-5,

\$3.75.

B-22

On Space Warfare: A Space Power Doctrine

Lt Col David E. Lupton, USAF, Retired

Colonel Lupton articulates the various doctrines, the historical perspective from which these doctrines are examined, and the broad context from which they are viewed. He defines the various belief structures or doctrines on both sides of the Star Wars debate.

1988. 164 pages. Public release.

B-1

Land-Based Air Power in Third-World Crises

Dr David R. Mets

Dr Mets examines the utility and limitations of land-based aircraft in third-world crises over the past three decades. He offers several conclusions regarding the most effective use of air power in crisis situations.

1986. 171 pages. Public release.

GPO-008-070-00575-1,

\$5.00.

B-21

Airlift Doctrine

Lt Col Charles E. Miller, USAF

Colonel Miller shows how the worldwide orientation of American foreign policy, the numerous threats to free-world interests, and the speed and complexity of modern warfare have combined with political and resource constraints to produce today's airlift doctrine and force structure.

1987. 447 pages. Public release.

GPO-008-070-00605-7, \$17.00.

B-17

Air Power and the Ground War in Vietnam: Ideas and Actions

Dr Donald J. Mrozek

Dr Mrozek focuses on expectations concerning the impact of air power on the ground war. He describes some of the actual effects but avoids treatment of some of the most dramatic air actions of the war, such as the bombing of Hanoi. He observes that the application of air power is influenced by factors far beyond the battlefield.

1987. 204 pages. Public release.

B-26

The US Air Force after Vietnam: Postwar Challenges and Potential for Responses

Dr Donald J. Mrozek

This book probes various groups of Americans as they come to grips with the consequences of the Vietnam War. Dr Mrozek examines several areas of concern facing the United States Air Force, and the other services in varying degrees, in the years after Vietnam.

1988. 133 pages. Public release.

B-12

Strategy for Defeat: The Luftwaffe, 1933-1945

Dr Williamson Murray

Dr Murray's book provides a detailed analytical study of the development of the Luftwaffe. The author takes an in-depth look at the "easy war" (1939-40) and the turn toward Russia in Operation Barbarossa. Dr Murray investigates the war of attrition from 1942 through early 1944 and the reasons for the final demise of the Luftwaffe from April through September 1944.

1983. 391 pages. Public release.

GPO-008-070-00483-6, \$9.50.

B-15

Aerospace Power: The Case for Indivisible Application

Maj Grover E. Myers, USAF

In *Aerospace Power*, Major Myers offers a serious alternative to "aerospace folklore." He proposes an indivisible air power concept and argues that it would result in a far more flexible aerospace force structure—one that gets the most from our increasingly expensive and limited assets and applies the right force at the right place at the right time.

1986. 96 pages. Public release.

B-11

Combat Operations C³I: Fundamentals and Interactions

Maj George E. Orr, USAF

The author introduces basic definitions, functions, and processes of command, control, communications, and intelligence (C³I). He develops a conceptual model of the combat operations process based on the American approach to war. The study investigates the stochastic nature of combat operations and develops a guide to effective command. Major Orr concludes that a distributed C³I architecture designed to exploit the unpredictability of combat is best suited to the true nature of combat and the strengths of American fighting units.

1983. 98 pages. Public release.

GPO-008-070-00492-5, \$4.00.

B-18

**Soviet Policies toward the
Developing World during the
1980s: The Dilemmas of
Power and Presence**

Dr Daniel S. Papp

This book provides a detailed examination of first functional and then regional aspects of Soviet policies in the third world. Dr Papp builds on previous comprehensive, regional, and functional analyses of Soviet policies in the developing world during the 1970s and earlier decades to provide an understanding of Soviet policies toward the developing world in the 1980s. He gives a factual background and an objective analysis of those policies as well as an understanding of motivations behind them.

1986. 430 pages. Public release.

B-7

**The Air Force, Conscription,
and the All-Volunteer Force**

Col Douglas A. Patterson, USAF

Lt Col James A. Hoskins, USAF

The authors consider the merits and drawbacks of both conscription and the all-volunteer military. They untangle many of the knotted ropes of fact and fiction. Col Patterson and Col Hoskins review the framework for analysis, weigh the evidence, and offer conclusions but not recommendations.

This book is the 1986 winner of the Air Force Historical Foundation's Col James Cannell Memorial Award.

1987. 168 pages. Public release.

B-19

**Dynamic Stability: A New
Concept for Deterrence**

Lt Col Fred J. Reule, USAF, et al.

This collection of essays adopts as its premise the idea that nuclear counterforce strategy is a logical impossibility without some degree of cooperation between the superpowers. Instead of considering the situation from an offensive perspective to see what capabilities we can develop to disarm our enemy, the authors explore the situation from a defensive perspective. They argue that technological progress is providing ever-increasing counterforce capabilities to both sides—concealment and mobility of retaliatory forces can deny an enemy the targets required for counterforce strategy. Colonel Reule and his group analyze the implications dynamically stable forces would have for the many dimensions of nuclear strategy and doctrine.

1987. 116 pages. Public release.





B-35

Building a Consensus toward Space: Proceedings of the Air War College 1988 Space Issues Symposium

John B. Rhinelanders et al.

The symposium's goal was to clarify several issues affecting the nation's future role in space. The participants examined topics such as the law of outer space, Soviet strategies and activities in space, European space efforts, and alternative space strategies.

1990. 138 pages. Public release.

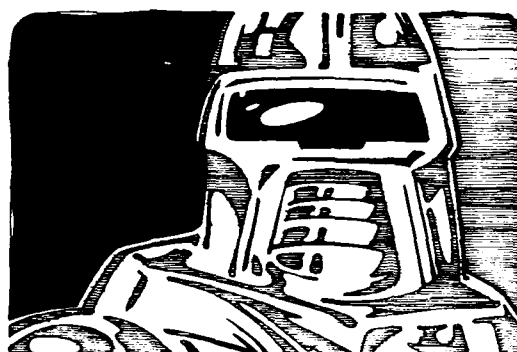
B-13

Strategic Nuclear Force Requirements and Issues

Capt George J. Seiler, USAF

Captain Seiler divides his book into five independent studies. He describes a methodology for measuring the strategic nuclear balance; examines each leg of the strategic nuclear triad in terms of limiting damage from a Soviet attack; discusses modernization of the ICBM force and examines ICBM roles and missions; analyzes the issue of modernizing the air-breathing triad leg and examines standoff weapons; and addresses the long-standing question of "How much is enough?"

1983. 182 pages. Public release.



B-30

Self-Protective Measures to Enhance Airlift Operations in Hostile Environments

Lt Col John A. Skorupa, USAF

Colonel Skorupa examines strategy, doctrine, forces, threat, and technological issues relating to airlift operations. He blends military art with industrial science. Colonel Skorupa explains threats to airlift and how electronic warfare and other technological applications would counter such threats.

This book is the winner of the Air Force Historical Foundation's 1988 Col James Cannell Memorial Award.

1989. 201 pages. Public release.

B-3

Beating International Terrorism: An Action Strategy for Preemption and Punishment

Dr Stephen Sloan

Dr Sloan writes this book primarily for senior and middle-level officials and officers who will be responsible for conducting war against terrorism. He examines several definitional problems, analyzes the factors involved in developing approaches to counter and preempt terrorism, and looks at the policy issues regarding the use of force.

1986. 80 pages. Public release.

B-42

Force and Accommodation in World Politics

Dr Stanley E. Spangler

Dr Spangler shows that conciliatory approaches or accommodative measures have frequently been avoided by the United States in its foreign relations and, if used, have too often been undervalued in comparison to military force. He develops a model or conceptual approach to foreign policy that he calls "positive diplomacy," which is to him a preferable method of integrating force and diplomacy in this very complicated and increasingly dangerous world.

1991. 380 pages. Public release.

GPO-008-070-00661-8, \$15.00.

B-10

Preserving the Lambent Flame: Traditional Values and the USAF Officer Accession Program

Maj Richard W. Stokes, Jr., USAF

Major Stokes analyzes the impact of current officer accession practices on the quality of the USAF officer corps. He argues that problems stem from an emerging preoccupation of the Air Force with meeting occupational specialist requirements without a concurrent concern for the preservation of the officer-first, specialist-second ethic. The study is limited to the precommissioning aspect of officer quality.

1984. 88 pages. Public release.

B-40

Setup: What the Air Force Did in Vietnam and Why

Dr Earl H. Tiltford, Jr.

American military professionals, especially the US Air Force, have had a difficult time understanding their role in this nation's defeat in Vietnam. Dr Tiltford provides a critical self-analysis and questions the underlying assumptions of the USAF's strategy in Southeast Asia. He argues that we must understand what went wrong in Vietnam and why and not manipulate the record and paint failure as victory. He explains what led to the "setup," which not only resulted in a failure for air power but also contributed to the fall

of South Vietnam, Laos, and Cambodia to Communist forces in 1975.

1991. 328 pages. Public release.

GPO-008-070-00657-0, \$12.00.

B-20

The United States Strategic Bombing Surveys

This volume contains reprints of the Summary Reports—30 September 1945 (European War) and 1 July 1946 (Pacific War)—of the strategic bombing surveys conducted as World War II was coming to a close.

Reprinted in October 1987.

B-43

Organizational Structure for Air National Guard Tactical Aircraft Maintenance

Col Rudolph Ventresca, ANG

Colonel Ventresca analyzes and assesses the changes in the organizational structure of the active Air Force and the Air National Guard (ANG) fighter maintenance units from the time the ANG became a separate reserve component in 1946 to the present-day organization, which parallels the active Air Force. He provides insight into the ANG tactical air forces maintenance organization by chronicling the past, viewing the present, and projecting the reader into the future, taking into account those things that will likely affect the way ANG tactical aircraft maintenance is organized and will operate in the future.

This book is the 1990 winner of the Air Force Historical Foundation's Col James Cannell Memorial Award.

1991. 116 pages. Public release.

B-4

Tunisia in the Post-Bourguiba Era: The Role of the Military in a Civil Arab Republic

Dr Lewis B. Ware

This on-site research study examines the role of the Tunisian armed forces in a changing society. The author explores the question of succession, its accompanying problems, and

their impact on sociopolitical developments. He addresses the role of the armed forces in the era after succession in the second part. The book concludes with a recognition of Tunisia's geopolitical importance, an assessment of present American policy, and recommendations for future initiatives.

1986. 83 pages. Public release.

B-24

Low-Intensity Conflict in the Third World

Dr Lewis B. Ware et al.

A common thread ties together the five case studies of this book: the persistence with which the bilateral relationship between the United States and the Soviet Union continues to dominate American foreign and regional policies. These essays analyze the LIC environment in Central Asia, the Middle East, Southeast Asia, Latin America, and sub-Saharan Africa.

1988. 189 pages. Public release.

B-8

The Foundations of US Air Doctrine: The Problem of Friction in War

Lt Col Barry D. Watts, USAF

This study analyzes air power doctrine from the viewpoint of Clausewitzian friction. The result of the analysis is the conclusion that American air power doctrine has changed very little since the 1930s and that it is fundamentally flawed.

1984. 159 pages. Public release.

B-34

Ethics in the US Air Force: 1988

Col Kenneth H. Wenker, USAF, et al.

A cadre of 29 (2 Navy, 25 Air Force, and 2 Army) Air War College (AWC) students in the 1988 class conducted a series of 222 oral interviews and a formal, written survey that had 627 respondents. The AWC student body provided an ideal starting point for accomplishing this in-depth study because its students brought a variety of backgrounds

and experiences to bear on the subject. Those surveyed or interviewed were from AWC, Air Command and Staff College, Squadron Officer School, and the Air Force Senior Noncommissioned Officer Academy. The study looks at perceptions of ethics and reports of ethical practices.

1990. 336 pages. Public release.

B-38

Archie, Flak, AAA, and SAM: A Short Operational History of Ground-Based Air Defense

Dr Kenneth P. Werrell

The title refers to the name that airmen use and have used to describe ground fire against aircraft: Archie in World War I (from the British), flak in World War II and Korea (from the Germans), AAA throughout but especially in Vietnam (from the American abbreviation for antiaircraft artillery), and most recently SAM (from the US abbreviation for surface-to-air missiles). This study concentrates on how these weapons developed and how they impacted both US and non-US air operations.

1988. 224 pages. Public release.

GPO-008-070-00630-8.

\$8.50.

B-6

The Evolution of the Cruise Missile

Dr Kenneth P. Werrell

Although among the newest of US weapons, the cruise missile possesses a rich conceptual and technological heritage. The author addresses this heritage and the importance of understanding it when we consider deployment and employment options. Without the perspective provided by this history, our perception of the cruise missile's purpose and use lacks depth and understanding.

1985. 303 pages. Public release.

GPO-008-070-00563-8.

\$7.00.

B-36

Military Air Power: The CADRE Digest of Air Power Opinions and Thoughts

Lt Col Charles M. Westenhoff, USAF

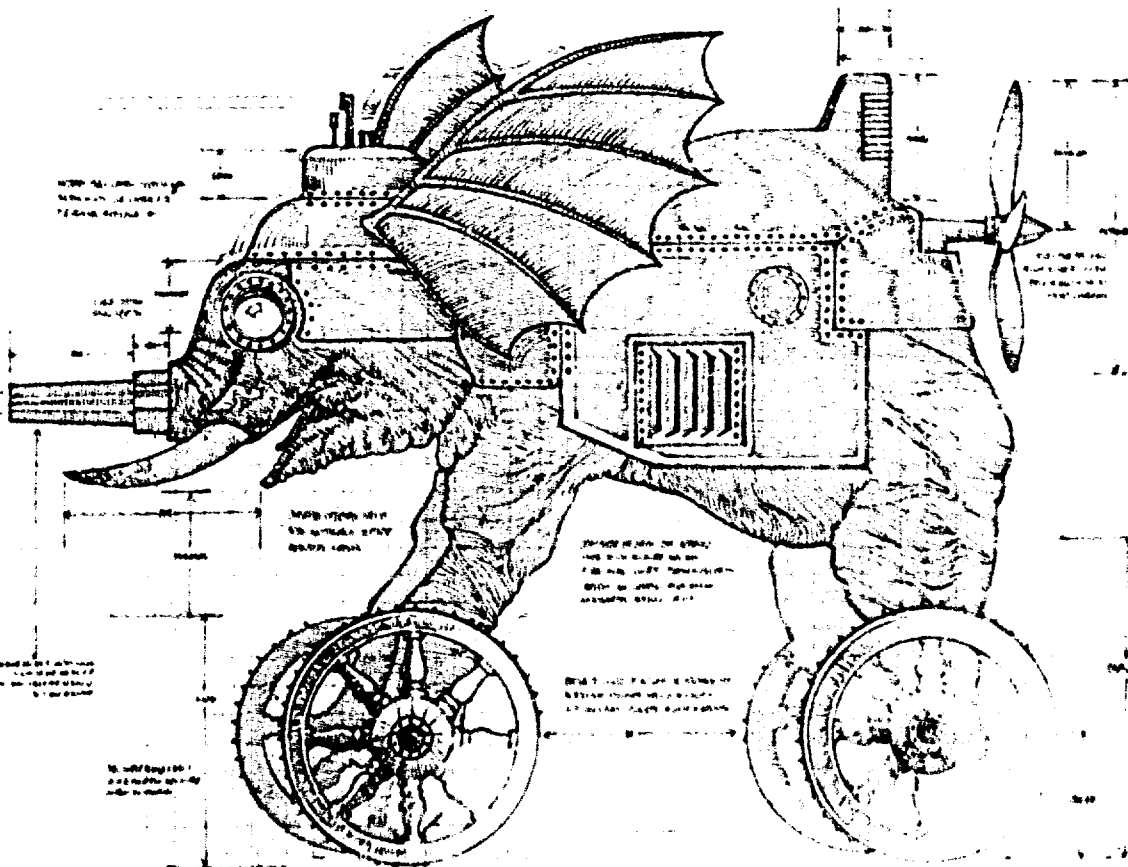
Colonel Westenhoff provides a collection of quotations about the utility and potential of

air power. The book is divided into the following sections: Air Power, War Technology, the Principles of War, and Command. This digest is organized to be a handy reference.

1990. 224 pages. Public release.

GPO-008-070-00653-7.

\$8.50.





CADRE Papers

P-12

Air Power and the Defeat of a Warsaw Pact Offensive: Taking a Different Approach to Air Interdiction in NATO

Lt Col Price T. Bingham, USAF

A different approach to air interdiction in NATO which emphasizes creating delay and disruption and taking advantage of the tremendous potential of the family of air scatterable mines.

1987. Public release.

Reprinted with permission from *Armed Forces Journal International* (Washington, D.C.), October 1986, 98-112.

P-18

Ground Maneuver and Air Interdiction in the Operational Art

Lt Col Price T. Bingham, USAF

A review of campaigns in World War II, Korea, and Vietnam to show that air interdiction's effectiveness depended on whether it forced the enemy to choose between experiencing unacceptable losses from air attack or moving too slowly for ground forces to succeed.

1989. Public release.

Reprinted with permission from *Parameters* (Carlisle Barracks, Pa.: US Army War College, March 1989), 16-31.

P-20

Operational Art and Aircraft Runway Requirements

Lt Col Price T. Bingham, USAF

A discussion of the importance of air bases to the exercise of operational art. The author shows why aircraft runway requirements are the key to the availability and operability of air bases during a campaign. In a review of World War II, Korea, and Southeast Asia, Colonel

Bingham shows how important air base availability and operability have been to the effectiveness of fighter/attack aircraft. Looking to the future, the threat posed by the Soviets promises to make air base availability and operability even more important to success.

1989. Public release.

Reprinted with permission from *Airpower Journal* (Maxwell AFB, Ala.: Air University Press, Fall 1988), 52-69.

P-17

Studying Soviet Low-Intensity Conflicts

Dr Stephen Blank

A brief discussion of Soviet historical experiences and political and military strategy applied to low-intensity conflicts. Dr Blank argues that US planners should not overlook these Soviet experiences or our own past struggles with insurgents. He adds that the US should not be too quick to judge local political struggles as extremes of superpower confrontations.

1989. Public release.

P-23

The International Dimension of Culture and Conflict: Proceedings of the Symposium

Dr Stephen Blank et al.

Essays presented at the International Dimension of Culture and Conflict Symposium held in honor of Adda B. Bozeman at Air University on 20 April 1990. Five regional specialists examine Professor Bozeman's assertion that culture influences the causes, nature, and conduct of war. The specialists' recent book, *Conflict, Culture, and History: Regional Dimensions*, expands on the ideas presented in these essays.

1991. Public release.

P-19

Defending against a Space Blockade

Maj Tom Blow, USAF

An analysis of the strategic implications of space-based weapons beyond those generally discussed in the strategic defense initiative debate. Major Blow suggests methods to prevent potential blockades in space from becoming reality.

1989. Public release.

P-13

Aerial Refueling: The Need for a Multipoint, Dual-System Capability

Maj Marck R. Cobb, USAF

An investigation of the possibility of using multipoint, probe and drogue refueling to alleviate tanker shortfall and to increase the effectiveness of tactical fighter operations.

1987. Public release.

P-5

Air Power in Small Wars: The British Air Control Experience

Lt Col David J. Dean, USAF

A brief examination of the concept of air control as practiced by the Royal Air Force (RAF) in the Middle East between the two world wars.

1985. Public release.

P-8

Project Control: Creative Strategic Thinking at Air University

Lt Col David J. Dean, USAF

A review of a strategic research project conducted at Air University during the early 1950s.

1985. Public release.

P-16

Insurgency and Counter-insurgency: American Military Dilemmas and Doctrinal Proposals

Col Dennis M. Drew, USAF

A look at low-intensity conflict from a military point of view.

1988. Public release.

P-9

Marlborough's Ghost: Eighteenth-Century Warfare in the Nuclear Age

Lt Col Dennis M. Drew, USAF

An examination of similarities between limited warfare in the eighteenth century and the age of nuclear weapons.

1985. Public release.

P-4

Military Art and the American Tradition: The Vietnam Paradox Revisited

Lt Col Dennis M. Drew, USAF

A brief assessment of the American strategy in Vietnam and traditional American military views about the art of warfare.

1985. Public release.

P-1

Rolling Thunder 1965: Anatomy of a Failure

Col Dennis M. Drew, USAF

A study of the interplay of policy and doctrine during the conduct of a major military campaign.

1986. Public release.

P-3

Study War Once More: Teaching Vietnam at Air University

Maj Suzanne Budd Gehri, USAF

A look at how Air University's professional officer schools teach the lessons learned from the Vietnam War and how their approach compares to those employed by civilian institutions of higher learning.

1985. Public release.

P-21

Realities of Revolutionary Violence in Southeast Asia: Challenges and Responses

Dr Lawrence E. Grinter

A comparative study of the responses of the Indonesian, Philippine, and Cambodian governments to violent revolutionary political challenges from the perspective of the three societies' historical, political, and socioethnic patterns of development. Dr Grinter examines the attitudes of these societies toward authority, their legacies of violence, and the comparative legitimacy and cohesion of their armed forces.

1990. Public release.

P-14

The Changing Western Alliance in the South Pacific

Wg Comdr Brian L. Kavanagh, Royal Australian Air Force

An examination of the Western alliance, its history and objectives, and the issues confronting it, with a blueprint for change.

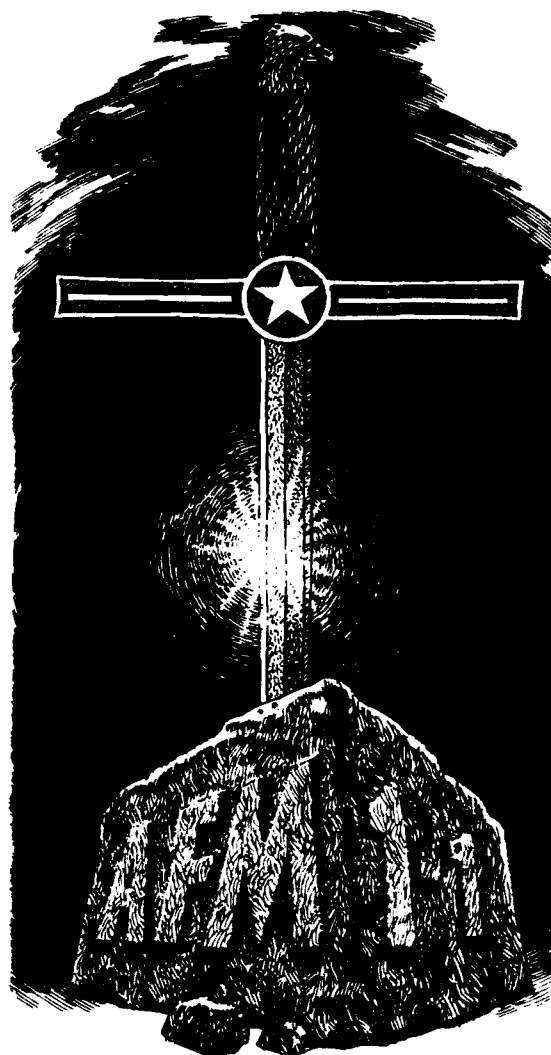
1987. Public release.

P-10

Policy and Strategy Foundations for Low-Intensity Warfare

Jerome W. Klingaman

A discussion of the foundations for policy and strategy development in the low-intensity realm—foundations crucial to defining national priorities and ultimately to shaping our



defense posture for countering threats of insurgency, revolution, and terrorism.

1986. Public release.

P-22

Optimizing the Post-START US Strategic Nuclear Force Mix

Lt Comdr David Allan Leary, USN

A critique of the current force mix, the effect that the Strategic Arms Reduction Talks (START) will have on existing forces, and the changes that this agreement would have on targeting priorities. Commander Leary's proposed post-START force mix would put more emphasis on submarine-launched ballistic missiles and less on the intercontinental

ballistic missiles and manned bomber legs of the Triad.

1990. Public release.

P-11

The Swords of Armageddon

Maj Grover E. Myers, USAF

An attempt to dispel the continuing myth that links strategic bombardment with nuclear holocaust, addressing the relevance of individual strategic actions to large, small, nuclear, and nonnuclear wars and the use of bombers and intercontinental missiles as viable force options in a variety of scenarios.

1987. Public release.

P-7

A Possible Fallback Counter-offensive Option in a European War

Dr Richard B. Remnek

A new look at the European situation and a new proposal for countering a possible Soviet attack.

1985. Public release.

P-2

Nuclear Winter: Asymmetrical Problems and Unilateral Solutions

Lt Col Fred J. Reule, USAF

An analysis of "nuclear winter asymmetries." Colonel Reule looks at the nature of the problem and tells why joint efforts to solve it are in the best interests of both superpowers.

1986. Public release.

P-15

Countering Terrorism in the Late 1980s and the 1990s: Future Threats and Opportunities for the United States

Dr Stephen Sloan

A brief overview of the terrorist threat, the types of terrorist groups, and the alternatives for countering terrorism.

1987. Public release.

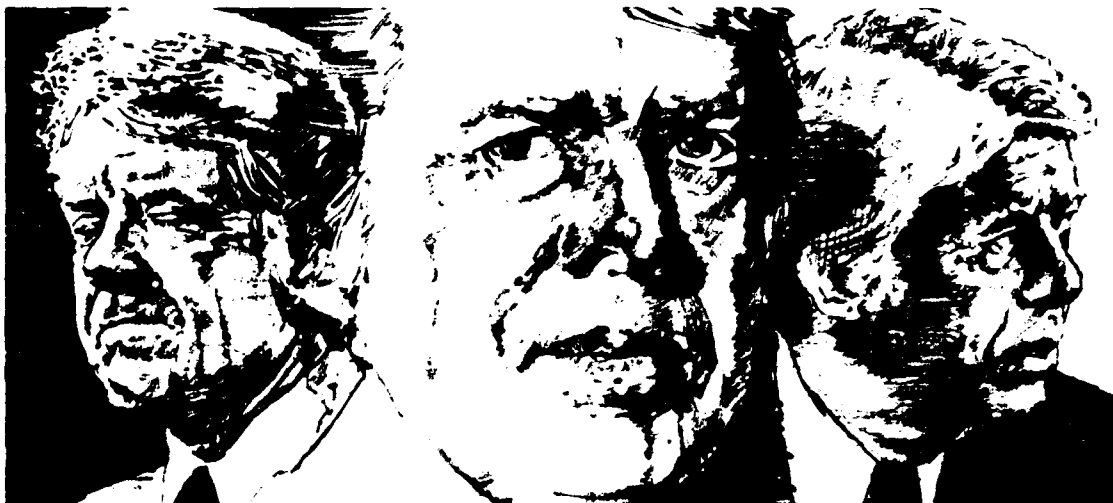
P-6

Some Observations on Islamic Revolution

Dr Lewis B. Ware

An analysis of Islamic fundamentalist revolutions, their roots, and their implications.

1985. Public release.



CADRE Papers Special Series

The Future of the Air Force

The changes in the complexion of international politics that began late in the decade of the 1980s will profoundly affect the American military establishment as a whole and the US Air Force in particular for the foreseeable future. Decisions made in the early part of the 1990s will essentially determine the course of the US Air Force well into the next century. This special series of CADRE Papers can be of considerable value to policymakers at all levels as they plan for the USAF and its role in the so-called postcontainment environment.

SS-15

Some Alternative Futures and Their Military Implications

Dr David E. Albright

A discussion of the validity of assumptions that underlie present thinking about military strategy and force structure for the US Air Force in the future. Dr Albright analyzes five basic assumptions about the international environment and US domestic situations that permeate current Air Force thought.

1992. Public release.

SS-12

Threats to US Security in a Postcontainment World

Dr David E. Albright

An appraisal of security challenges critical to shaping US national military strategy and military force structure in a postcontainment world. Dr Albright analyzes four major threats in descending order of importance that seem likely to face the United States. He argues that the US must revise its military strategy and force structure in major ways to meet these security challenges (regional conflicts, Soviet nuclear forces, terrorism, and Soviet conventional forces). Dr Albright cautions the United States not to abandon all of its prior thinking about military strategy and force structure as it prepares to defend US interests in the years ahead.

1992. Public release.

SS-13

Clausewitz on Space War: An Essay on the Strategic Aspects of Military Operations in Space

Lt Col Donald R. Baucom, USAF, Retired

An examination of the applicability of Clausewitz's intangible factors of war—danger, uncertainty, chance, and moral factors—and the mathematical methods of operations research, systems analysis, and the chaos theory to the high-technology arena of space operations. Although he finds that US experience and training reveal that luck applies in space operations, Colonel Baucom argues that technology and national genius make it probable that future space weapons will produce a high predictability of success. These achievements will likely carry over to other high-technology weapon systems. Opposing forces will have to factor in this predictability of success in any calculations they make about our future capabilities.

1992. Public release.

SS-9

Tailoring the Tactical Air Control System for Smaller-Scale Contingencies

Lt Col Robert J. Blunden, Jr., USAF

A discussion of the importance of Tactical Air Command's tactical air control system (TACS) in most, and especially smaller-scale, contingencies and the need to reduce the size and complexity of the TACS without losing the required command and control functions. Colonel Blunden discusses the structure and functions of the present TACS, formulates

seven principles for control of air power in a contingency, and analyzes the changes necessary to make the TACS responsive to worldwide contingency operations. He examines the importance of the subordinate air support operations center (ASOC). Colonel Blunden says the contingency operations in the future require a tailored TACS. He points out seven principles to be followed and some issues to be resolved if the AF is to field a customized TACS for smaller-scale contingencies.

1992. Public release.

SS-6

At War with the Soviets: A Historical Perspective of Joint Soviet-American Air Operations

Capt Mark J. Conversino, USAF

Captain Conversino provides a historical review of the units of the Eighth and Fifteenth United States Army Air Forces that flew to and from bases inside the Soviet Union in the summer of 1944. He focuses on the Eastern Command's relations with the Soviets during military exercise Operation Frantic and also points to parallels of Frantic to Operation Desert Storm. Captain Conversino concludes that Frantic represents an experiment in true military cooperation between the two great powers.

1991. Public release.

SS-11

Cost-Performance Choices in Post-Cold-War Weapon Systems

Col Raymond E. Franck, Jr., USAF

An overview of past experience in exploiting technology for military purposes and a discussion of an ongoing debate about cost and performance in major weapon systems. After reviewing briefly the historical record, Colonel Franck asserts that most of the criticism of the acquisition process does not withstand close examination. Finally, Colonel Franck offers some thoughts on cost and performance trade-offs in the post-cold-war period.

1992. Public release.

SS-5

East Asia and the United States into the Twenty-first Century: Planning Future American Policy and Strategy Options

Dr Lawrence E. Grinter

An analysis of the United States' role as the ultimate arbiter of East Asia's prosperity and stability, future US security options in East Asia and the Western Pacific region, options for US policy/strategy, and a long-term US security policy and strategy in the region. For the next decade, he argues that US policy and strategy toward East Asia must be planned with the whole spectrum of US interests and East Asia's evolving potential in mind. He describes the major regional trends and examines how the US should react to projected scenarios.

1991. Public release.

SS-10

Africa's Realignment and America's Strategic Interests in the Postcontainment Era

Dr Karl P. Magyar

A review of Africa's conflict environment and sociopolitical development. His review reveals that violence is likely to remain an endemic condition throughout Africa for the foreseeable future. Dr Magyar discusses contemporary strategic concerns. He asserts that the continent's role in international drug trafficking and problems of the acquired immune deficiency syndrome—though not directly challenging to US interests—will require assistance from the United States. He concludes that the US has few traditional security interests in Africa but new developments since the 1991 war with Iraq should be of great interest because conflicts on the African continent are increasingly tied to those of the Middle East.

1992. Public release.

SS-14

Checking Six Is Not Enough: The Evolution and Future of Air Superiority Armament

Dr David R. Mets

A discussion of the past, recent developments, and future prospects of gun and missile armaments for air-to-air combat. Dr Mets examines the relationship between the weapons, the platforms, and the evolution of air superiority doctrine. He discusses the possibility that the appearance of small, medium-range, multimode radar-guided, fire-and-forget missiles and possible new sight, gun, and ammunition innovations might be seen as evolutionary. Dr Mets concludes that air armament technology, evolutionary through history, may be on the verge of revolutionary change. He also speculates on the future of air superiority doctrine with a view toward avoiding the gap between it and the training that limited USAF effectiveness in Vietnam.

1992. Public release.

SS-3

Role of Air Force Special Operations in Foreign Internal Defense

Maj John R. Moulton II, USAF

An examination of the emerging requirements to assist in foreign internal defense. Major Moulton highlights the need for integrated programs designed to support the host-nation's goals and capabilities as well as US regional and country-specific objectives. He recommends the Air Force create an institutional support that focuses on strategic concepts, formal education, and training rather than on force structures, such as creating a "flying-wing" organization patterned after the Special Air Warfare Center.

1991. Public release.

SS-1

Reinventing the Wheel: Structuring Air Forces for Foreign Internal Defense

Maj Richard D. Newton, USAF

A proposal that the USAF establish an institution modeled after the Special Air Warfare Center. The resulting foreign internal defense (FID) wings would enable the Air Force to structure itself for missions across the conflict



spectrum that would take advantage of equipment and skills in the Air Force of the 1990s. Major Newton notes that since the deactivation of the Special Air Warfare Center in 1974, the USAF has lacked the organic capability (doctrine, force structure, and training) to help foreign governments fight insurgencies. His notional FID wings would enable the Air Force once again to perform training, provide logistical support, and direct the transfer of excess aircraft to the air forces in the less-developed nations that request assistance from the United States.

1991. Public release.

SS-4

The Impact of Decreased Department of Defense Spending on Employment in the United States

Lt Col R. Theodore Roth, USAF

An analysis of the employment impacts of decreased defense spending upon the economy of the United States. Colonel Roth looks at the levels of spending in the post-cold-war period and at the effects that cut-backs have on individuals employed by the

Department of Defense and the occupations and industries that are most affected by the decreases. He argues that reductions made at a controlled rate will have limited economic impacts.

1991. Public release.

SS-16

The Functions and Structure of Nuclear Deterrence in the Post-Cold-War World

Dr Donald M. Snow

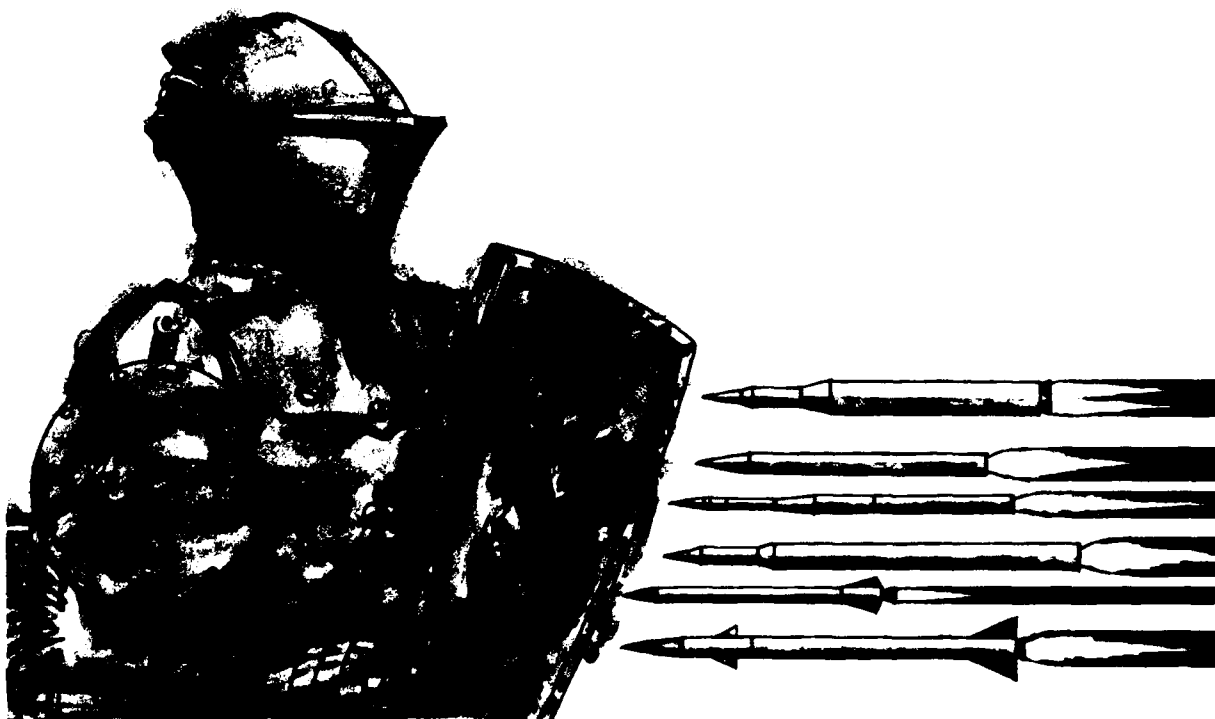
More for Less—An Arms Control Strategy for the 1990s

Col Randall E. Wooten, USAF

Col Eric E. Sundberg, USAF

A SIOP for Perestroika?

Col Richard Szafranski, USAF



Theater Nuclear Forces and Extended Deterrence in a Multipolar World

Maj David L. Booker, USAF

An assessment of the future of nuclear deterrence and balance in the world arena. These essays examine the nature of the evolving strategic relationship between the US and the Soviet Union, arms control options, and what we know about nuclear weapons and how they related to national power in the last decade. They address the problems of the spread of nuclear weapons technology throughout the world and how this proliferation will affect the future of deterrence and nuclear disarmament. Although none of the contributors offer solutions for the problems of a future nuclear world, they tacitly concede that the emerging cooperation between the cold war superpowers seems to offer an unprecedented opportunity for both nations to avoid nuclear war and sets the agenda to make our world safer and more secure through nuclear weapons development and deployment policies based on a shared security commitment to deterrent stability and risk reduction.

1992. Public release.

SS-2

GEO, LEO, and the Future

Col Richard Szafranski, USAF

An assertion that policymakers have an obligation to understand the contributions that space systems can make to national security. Colonel Szafranski emphasizes the importance of space-based systems in geostationary or geosynchronous earth orbit (GEO) and in low earth orbit (LEO) and how they will play key roles in deterring future wars, resolving conflicts, improving communications, aiding navigation, and supporting the internal defense and development strategies of developing nations.

1991. Public release.

SS-7

Military Unity and National Policy: Some Past Effects and Future Implications

Warren A. Trest

A discussion of the effect of major reform legislation on military unification and the impact that three radical changes in national security policy have had on the plans, goals, and institutional ambitions of the branches of the US armed services. Trest examines how the National Security Act of 1947, the Defense Reorganization Act of 1958, and Goldwater-Nichols Act have affected military unity. He reflects on the many ways that major trends in national security policy—nuclear deterrence, the "New Look" and massive retaliation, and flexible response—have affected each of the military branches.

1991. Public release.

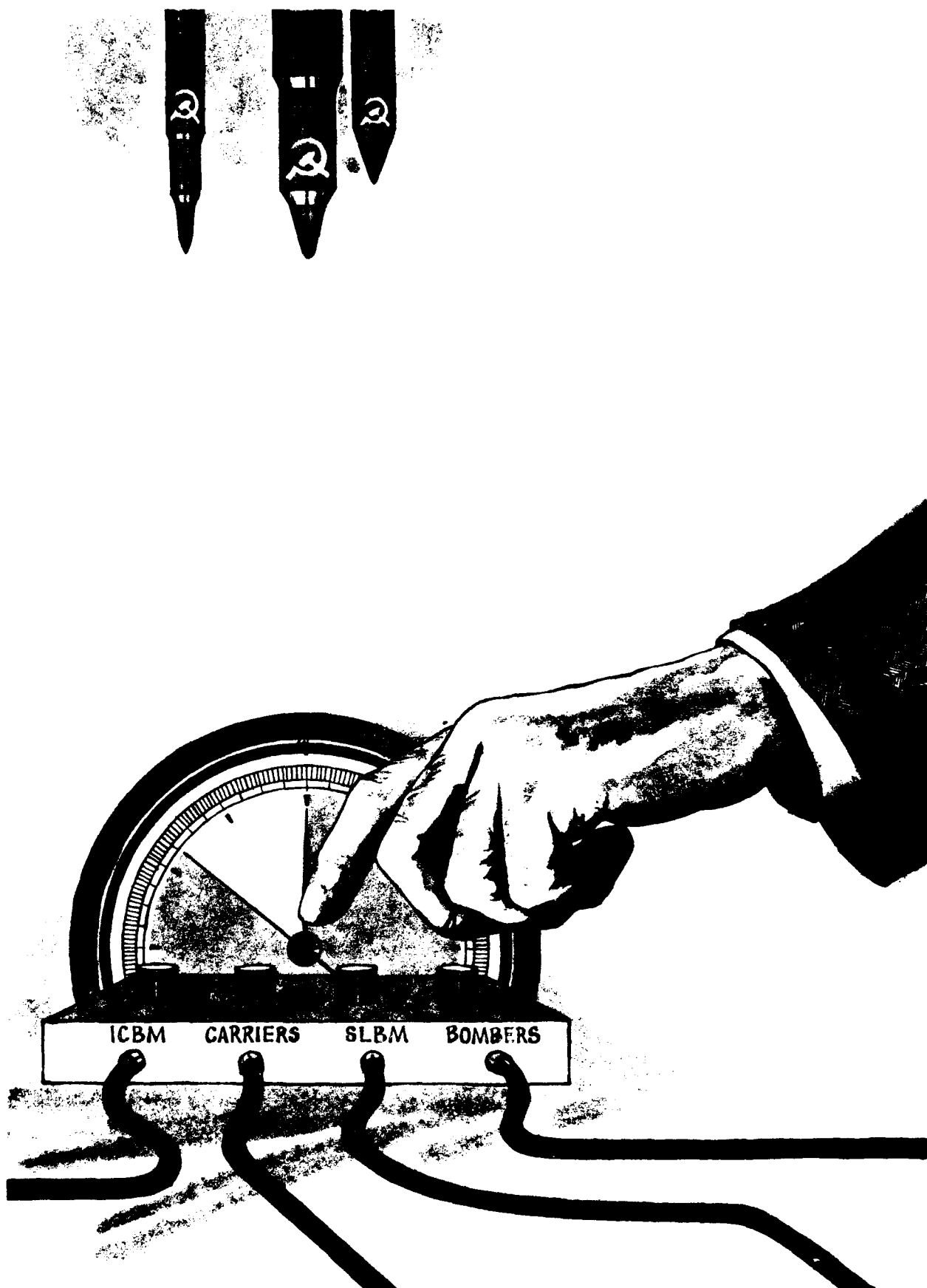
SS-8

Toward an American Political-Military Policy for the Middle East in the Twenty-first Century

Dr Lewis B. Ware

Dr Ware reexamines American national interests, establishes the scope of a future Middle Eastern political-military policy for the United States, defines the Middle Eastern security environment into the next century, and clarifies the nature of regional instability. He concludes that future Middle Eastern conflicts will most likely result from crises created by such radical forces as militant Islamism. Dr Ware proposes that the US restructure its military forces for regional deployment to meet unconventional threats to peace.

1991. Public release.



Unclassified Reports

R-49

Prevalence of Careerism among US Air Force Officers

Lt Col Roger W. Alford, USAF

This study provides quantitative evidence that careerism is a prevalent attitude among Air Force officers. He uses demographic data and a survey to support his hypothesis.

1989. 129 pages. Public release.

R-52

The Effect of Higher Education Variables on Cadet Performance during 1987 Light Aircraft Training

Lt Col Larry E. Baker, USAF

Colonel Baker makes a statistical analysis of data to determine which selection criteria may have the most reliability as predictors of success in the AFROTC light aircraft training (LATR) program and which also may have validity as predictors of success in undergraduate pilot training.

1989. 278 pages. Public release.

R-27

Command of the Aerospace: Convergence of Theory and Technology in Shaping an Aerospace Force for 2025

Maj Arthur L. Bennett, Jr., USAF

The author reviews the technological progress of the last 40 years, surveys the current achievements, looks forward to the possible technological achievement of the next 40 years, and concludes that aerospace will be the arena of the most important military development during that period.

1986. 97 pages. Public release.

R-54

Return of the Strategic Minuteman

Lt Col Archie J. Berberian, ANG

This study examines the history of the Air National Guard's involvement in the strategic airlift mission and evaluates the performance of the Guard. Colonel Berberian's report reviews the factors affecting decisions about the ANG's involvement in the strategic transport of troops and materiel.

1989. 48 pages. Public release.

R-48

Forward Offense: Preparing the B-52 for Conventional Warfare

Maj Gregory J. Berlan, USAF

Maj Berlan focuses on how the Strategic Air Command organizes, equips, and trains B-52 forces for conventional operations and recommends changes to make the B-52 force more effective in its conventional role.

1989. 117 pages. Public release.

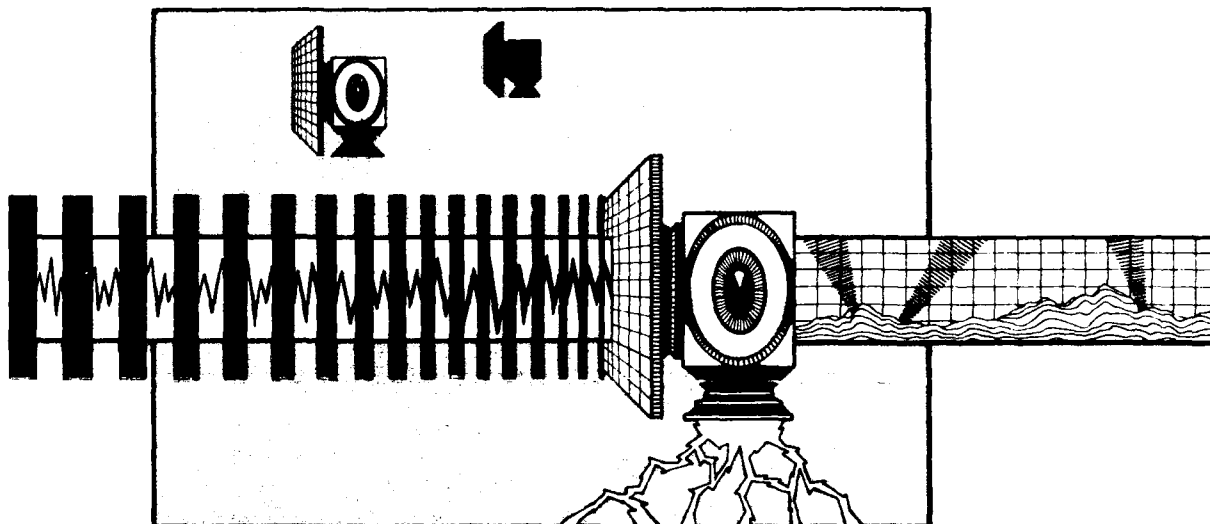
R-32

LANTIRN Operational Training for the F-15E and F-16C/D

Lt Col David G. Blair, USAF

This study focuses on the problems associated with the major air commands introducing the low-altitude navigation and targeting infrared for night (LANTIRN) system to their theaters, implementing crew training plans, and ensuring that support requirements are in place when LANTIRN is fielded.

1986. 98 pages. Public release.



R-46

Intelligence Support to Operations: The Role of Professional Military Education

Lt Col Herbert J. Boasso, USAF

This study considers how the Air Force might better use its professional military education (PME) resident program to inform the operational force of intelligence applications. Knowing how to use intelligence information and force application could enhance overall warfighting capabilities. Colonel Boasso's review of the PME programs at Air University from an intelligence perspective provides insights and suggestions for change.

1988. 60 pages. Public release.

R-19

Impact of New Technology Weapons on SAC Conventional Air Operations

Col Clyde E. Bodenheimer, USAF

This study examines the use of strategic bomber assets in nonnuclear applications. The author includes a historical survey, examines US policy, and discusses aircraft attrition in today's lethal defensive environment. Colonel Bodenheimer addresses the development of standoff air-to-surface weapons and the leverage they provide in a variety of worldwide employment scenarios.

1983. 146 pages. Public release.

R-6

The Use of Air Power in Joint Maritime Operations

Capt Thomas Bradley, USAF

This study addresses the US military establishment's increasing concern with maritime operations and the role of air power in conjunction with these operations. It also points out the difficulties encountered when integrating Air Force resources and efforts with those of naval and marine forces.

1985. 150 pages. Public release.

R-7

Subcontracting Management: A Frontier of Opportunity

Maj Donald D. Brechtel, USAF

This study examines the critical area of weapon systems acquisition and suggests efficient management techniques for the procurement of these systems.

1985. 276 pages. Public release.

R-51

Support the Troops! Paying Our People in Hostile Forward Areas

Lt Col Bill D. Brogdon, USAF

This study provides a logical background for the recommendations to implement a military

pay system to support troops operating in hostile forward areas.

1988. 68 pages. Public release.

R-34

**The Tactical Air Control System:
Its Evolution and Its Need for
Battle Managers**

Maj Thomas H. Buchanan, USAF

Major Buchanan first describes the evolution of the tactical air control system (TACS)—especially radar systems—and what it will look like in the early twenty-first century. He then examines centralized control/decentralized execution and the impact fog and friction will have on it.

1987. 102 pages. Public release.

R-14

**On Space Warfare: Military
Strategy for Space Operations**

Maj Robert H. Chisholm, USAF

This study synthesizes a US military space strategy for national policy, military strategy, military threats, economic constraints, and political restrictions.

1984. 84 pages. Public release.

R-8

**Artificial Intelligence: A User
Friendly Introduction**

Col Pat O. Clifton, USAF

This study examines the state of development of artificial intelligence (AI) and its potential applications. It is intended as an introductory handbook that will enable senior staff members to become more familiar with AI's rapidly evolving technology.

1985. 73 pages. Public release.

R-36

**Tactical Air Command
Antiterrorism Program: A Review**

Lt Col William P. Comstock III, USAF

This report ties together the antiterrorism program in the Tactical Air Command (TAC) by summarizing it from a historical standpoint, reviewing its current status, and suggesting ways of making the program more effective. It also examines both the Strategic Air Command and Military Airlift Command approaches to terrorism. Colonel Comstock offers recommendations on what portions of their programs that may be useful to TAC.

1987. 67 pages. FOUO.

R-53

**International Competitiveness:
A National Security Perspective**

Maj Ronald H. Dabrowski, USAF

This study argues that the United States has experienced and will continue to experience a relative decline in its global power as other nations continue to prime their economic machines. Major Dabrowski looks at the past, present, and future status of our nation's economic machine, with a focus on the supercomputer industry.

1989. 63 pages. Public release.

R-16

**A Review of the Communications-
Electronics Work-Load
Management System**

Lt Col Robert E. Daniels, USAF

This study reviews the management information system that supports the engineering and installation mission of the Air Force Communications Command. Colonel Daniels argues that the numerous problems in the system suggest the need for a total restructuring.

1984. 63 pages. FOUO.

R-50

Personality: Its Use in Selecting Candidates for US Air Force Undergraduate Pilot Training

Col Roy A. Davis, USAF

Colonel Davis examines the feasibility of incorporating personality testing in the undergraduate pilot training selection process.

1989. 100 pages. Public release.

R-38

Managing the Career Trainer Track in the Air Training Command

Maj David O. DiMarchi, USAF

This study proposes a "master plan" to guide the future management of the men and women who comprise the career trainer force—the rated force assigned permanently to Headquarters Air Training Command.

1987. 78 pages.

R-1

The Branch Point Study: Specialized Undergraduate Pilot Training

Maj Joseph F. Dorfler, USAF

This study examines the criteria the Air Training Command uses in assigning student pilots to advanced pilot training tracks. He uses statistical data to analyze whether these criteria would prove reliable predictors of accurate selection if the decisions were made earlier in UPT.

1986. 122 pages. Public release.

R-75

Military Airlift: Turbulence, Evolution, and Promise for the Future

Lt Col Thomas E. Eichhorst, USAF

Colonel Eichhorst provides an overview of military airlift from its sporadic beginning to the present. The study evaluates the Airlift Master Plan and the Airlift Total Force Plan at midcourse and identifies seven issues possi-

bly at variance with the original plans. The author provides background for readers not acquainted with airlift to understand the problems encountered in planning a future airlift force.

1991. 111 pages. Public release.

R-10

High Technology Troubleshooter: A Strategy for Increased Effectiveness of the AFCC Maintenance Technician

Maj Edward W. Feeley, Jr., USAF

Our vision of the high technology future is shortsighted when we fail to consider the logistics infrastructure required to support and maintain sophisticated weapon systems. The author approaches one aspect of the high-tech support system, focusing on the maintenance problems of the Air Force Communications Command.

1985. 184 pages. FOUO.

R-3

Effectiveness of the MILSATCOM Requirements Process

Maj David J. Fitzgerald, USAF

The author addresses the military satellite communications requirements planning process, the problems, and the increasing probability that operational deficiencies will emerge. He suggests appropriate changes. Major Fitzgerald offers a departure point for examining any requirements-intensive process complicated by fast-paced technological changes and the influence of several organizations.

1986. 220 pages. Public release.

R-37

Strategic Defense Initiative Battle Management

Lt Col Paul H. Flynn, USAF

In this study the author presents an independent view on the evolution of battle management in a ballistic missile defense system.

1987. 61 pages. Public release.

R-9

A Conceptual Design for a Model to Meet the Wargaming Needs of the Major Commands of the United States Air Force

Lt Col Daniel B. Fox, USAF

This study examines several new and expanded wargaming opportunities. One of these, the Command Readiness Exercise System (CRES), will not only provide wargaming capabilities for students in professional military education courses but will also provide a new capability for operational wargaming to commanders of the major commands. Colonel Fox reviews the history of wargaming, provides an overview of the status of hardware and software developments, and discusses the limitations of war games. The author examines potential applications for the Air Force Wargaming Center and offers recommendations for implementation as a part of CRES.

1985. 78 pages. Public release.

R-11

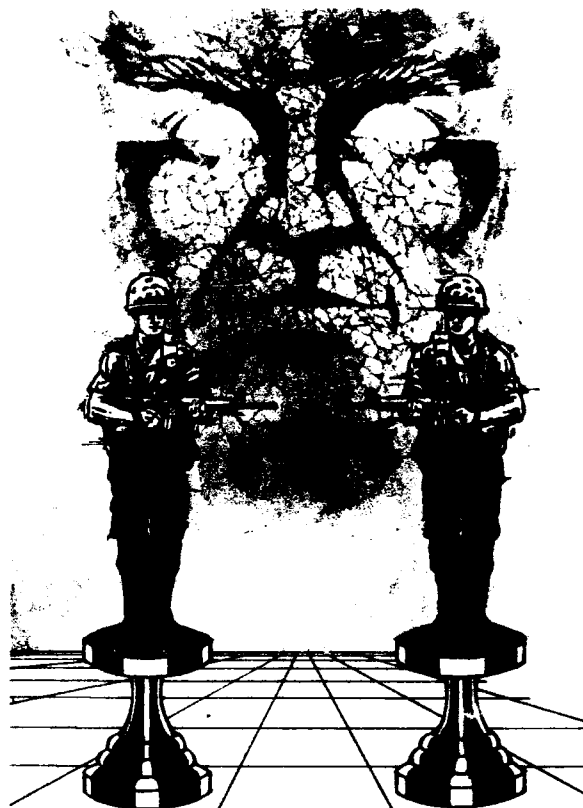
Strategic Forces in Transition: A Doctrine for Indivisible Aerospace Application

Lt Col J. E. Frisby, USAF

Maj Grover E. Myers, USAF

This study explores new approaches to the application of aerospace forces. Volume I describes the dual concepts that are the basic elements of the study's thesis: the indivisibility and global nature of aerospace power. While the final product is a statement of strategic offensive doctrine, the study actually suggests that all aerospace forces should be applied according to their ability to accomplish the mission(s) at hand. Volume II selects one element, the bomber, and addresses the importance of its capability for performing nonnuclear strategic and tactical tasks. The authors demonstrate that the designation "strategic" or "tactical" is not determined by which weapon is used but by how it is used. Finally, an appendix contains a proposed doctrine manual, 2-XB, *Strategic Aerospace Offensive Operations*, intended to replace AFM 2-11 published in 1972.

1985. Two volumes, 278 pages. Public release.



R-26

Training of Special Agent IMAs Assigned to the Air Force Office of Special Investigations: An Empirical Analysis

Lt Col James R. Giermansk, USAF

This in-depth research effort examines the state of individual mobilization augmentee (IMA) training in AFOSI and how that training is viewed by the IMAs.

1986. 174 pages. Public release.

R-61

Tactical Air Support of Ground Forces in the Future

Lt Col Harold T. Gonzales, Jr., USAF

This study establishes the architecture for answering the question, What is air support for ground forces? Colonel Gonzales examines the evolution of tactical air support doctrine from the early World War I experiences through the Vietnam conflict and how many of the emotional issues associated with

close air support have arisen. His recommendation is that Army and Air Force leaders focus more on *what* that support is to accomplish than on *how* it is to be accomplished.

1990. 98 pages. Public release.

R-17

The Defense Industrial Base: Prescription for a Psychosomatic Ailment

Maj Clyde E. Gulick

The author... history of industrial preparation... the United States and high... for peacetime preparedness... He also identifies weaknesses in the industrial base caused by such problems as uncertainty, lack of investment, layering, and dependence on foreign suppliers.

1983. 70 pages. Public release.

R-64

A New Distribution Priority System

Maj Donald E. Hamblin, USAF

The author argues that a new distribution priority system is feasible. Major Hamblin concludes that the Air Force can change not only its current uniform materiel movement and issue priority system (UMMIPS) but also the priorities codified in the military standard requisitioning and issue procedures (MILSTRIP). He develops a model and demonstrates how, by coupling it with a new concept called distribution and repair in variable environments (DRIVE), the unified commander and the wholesale distribution system can allocate scarce supplies quickly to our most important wartime units.

1990. 66 pages. Public release.



R-76

Wartime Air Traffic Control

Maj Pamela A. Hamilton-Powell, USAF

This study examines four separate but related areas: basic concepts, operational factors, equipment factors, and recommendations. The author addresses the wartime role of air traffic services and establishes the importance of integrating air traffic control considerations in the air base operability planning process.

1991. 76 pages. Public release.

R-15

Price Competition in Weapons Production: A Framework to Analyze Its Cost-Effectiveness

Lt Col Richard J. Hampton, USAF

Competition is often cited as a panacea for controlling defense expenditures. This study reveals that the case for competition has often been overstated and that competition under certain conditions can lead to serious problems.

1984. 131 pages. Public release.

R-21

AFOSI: Meeting Its Protective Security Mission in the Face of Contemporary Terrorism

Lt Col Dieter H. Heinze, USAF

Colonel Heinze reacts to the growing terrorist threat against US military personnel and installations by examining the entire protective security program of the Air Force Office of Special Investigations.

1983. 56 pages. FOUO.

R-41

Innovation in the Strategic Air Command

Lt Col Clarence O. Herrington, Jr., USAF

Colonel Herrington examines innovation as a general concept, then focuses on two Air Force innovation task forces. The first was formed

by direction of the Air Staff and the second by direction of Headquarters Strategic Air Command. By following the recommended actions of this report, SAC and the Air Force can better define the environment and the ways to promote innovation and initiative.

1987. 121 pages. Public release.

R-47

Deployment and Automated Technical Order Support

Lt Col Edward J. Higbee, USAF

This research study builds a framework for understanding the many considerations attendant to integrating an automated technical order system into Air Force deployments.

1989. 69 pages. Public release.

R-69

Air Force Audit Agency Management Information System

Maj Charles A. Hobbs, USAF

Major Hobbs explains the differences between centralized and decentralized computing and analyzes the strengths and weaknesses of each. He addresses only the specific needs of the Air Force Audit Agency. However, the premise is that modern information systems should consider the desires of the end users and should combine the best attributes of centralized and decentralized systems to apply to any organization.

1990. 124 pages. Public release.

R-42

Environmental Law for the Air Force

Lt Col Laurent R. Hourclé, USAF

This primer on environmental law summarizes the application of various environmental laws (clean air, clean water, land use, and others) to the Air Force. Colonel Hourclé details the requirements of these statutes.

1987. 468 pages. Public release.



R-40

Recruiting Resource Redistribution: New Technology Means New Capability

Maj William L. Jester, USAF

Major Jester proposes a computer-based decision support system to help recruiting planners predict how best to relocate resources to meet shifts in the market. He identifies a system that will provide Air Force recruiting every opportunity to save time, money, and manpower—a software system that offers many program applications for the analysis of market optimization and goal-allocation techniques.

1987. 94 pages. Public release.

R-22

ATC and War

Maj Rex W. Jones, USAF

Col Richard G. Thompson, Jr

This report addresses the issues of Air Training Command in a wartime environment. It must take to operate in that environment. The report discusses the variable impact of war on the supply of and demand for training personnel; they discuss the development of war-oriented programs and mentality, structural requirements, and such specific

issues as recruiting, basic military training, and flying training.

1983. 131 pages. FOUO.

R-68

Cockpit Resource Management: A New Approach to Aircrew Coordination Training

Maj Ricky J. Keyes, USAF

Major Keyes describes cockpit resource management training as a new approach to training aircrews and recommends ways to implement this training during specialized undergraduate pilot training. He discusses the advantages of this training and describes how such training helps to reduce the number of aircraft accidents. He identifies the critical elements of aircrew coordination training.

1990. 62 pages. Public release.

R-63

Air National Guard Fighters in Europe: Readiness through Training and Mission

Lt Col Roy A. Keyt, ANG

Colonel Keyt identifies the types of training and specific missions for the Air National Guard (ANG) in the European theater that

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would prepare Guard units to fulfill their obligations within the context of the total force policy. He discusses possible future programs that would allow the ANG fighter community to gain vital experience in Europe while providing valuable services to the active Air Force.

1990. 128 pages. Public release.

R-13

The Silent Call-up Option: Volunteerism in the Air National Guard

Col Michael N. Killworth, ANG

Colonel Killworth points out that planned reductions will force the Air Force to rely increasingly on the Air National Guard (ANG) and reserves to meet future national security challenges. He discusses the importance and effectiveness of the involuntary reserve call-up. He looks at requesting volunteers from specific Air Guard units as an option to access and employ ANG forces. He identifies the issues of availability of reserve call-up authority, planning guidance and commander preference for volunteerism, unit integrity, family and employer support, gubernatorial consent, and the force quantification that surrounded volunteerism in Just Cause in Panama and Desert Shield/Storm in Saudi Arabia.

1992. 57 pages. Public release.

R-29

United States Air Force Emergency Service Teams and Hostage Negotiations

Lt Col Bernal Koehrsen, USAF

This study offers a plan for controlling hostage situations and enhancing the preparedness of Air Force security police personnel.

1986. 173 pages. Public release.

R-62

Attacking Ships: Command and Control of Joint Antiship Operations

Lt Col Robert C. Kuhlo, USAF

This study investigates a key element in maritime operations: the command and control required by Air Force and Navy forces in effective joint antiship operations. By comparing the command and control doctrine, procedures, and organizations of the Joint Chiefs of Staff, the Air Force, and the Navy, Colonel Kuhlo identifies areas of agreement and conflict, highlights problems, and recommends areas for improvements.

1990. 66 pages. Public release.

R-31

Toward a Healthier Aeromedical Operation: Integrating Medical Policies and Airlift Concepts

Lt Col Jerry N. Lee, USAF, MSC

Aeromedical evacuation operations play a major role in the military health care system. The author focuses on the problems associated with integrating resources and concepts of airlift with military medical policies.

1986. 48 pages. Public release.

R-71

An Analysis of Trusted Computer Evaluation and Certification

Maj Eric Lewallen, USAF

Major Lewallen analyzes how to determine what the Air Force can do to help users develop and acquire trusted systems. The objectives are to help the users understand the benefits of trusted systems, to explain the problems associated with the current evaluation and certification processes, and to identify ways to make it easier to develop and acquire trusted systems.

1991. 43 pages. Public release.

R-43

An Analysis of the Air Force Computer Security Program

Maj Carol E. Ludwig, USAF

Major Ludwig makes an in-depth analysis of computer security. She deals with the subject in a general way and not with technical issues, focusing on the program rather than on the specific facets of security. She concludes that the current Air Force computer security program is not well suited for today's environment.

1987. 143 pages. Public release.

R-18

The Role of Simulation in Operational Test and Evaluation

Lt Col Greg A. Mann, USAF

Colonel Mann focuses on the application of simulation techniques to the problem of assessing a weapon system's performance in its operational environment. He provides a tutorial on simulation concepts, management, and application in the test environment; defines when and where simulations are appropriate; and makes recommendations for incorporating simulations into OT&E.

1983. 105 pages. Public release.

R-59

Building Blocks in Space

Lt Col James D. Martens, USAF

In this study, Colonel Martens examines the role of standardization and modularity in solving operational, acquisition, and supportability concerns. The author evaluates the advantages, disadvantages, and difficulties of standardizing military space systems. He examines modular construction as a method of applying standardization to future spacecraft development. Colonel Martens's conclusions suggest new alternatives for space vehicle construction during the next decade.

1990. 60 pages. Public release.

R-57

Air Base Security: Developing an Operational Doctrine

Maj David C. Martin, USAF

This study is an introduction to an operational doctrine for air base security and a valuable guide to the people who will eventually prepare that document.

1990. 64 pages. Public release.

R-58

Quality Flight-Line Maintenance: A Prescription for the 1990s

Lt Col Henry M. Mason, USAF

In this study Colonel Mason presents an alternative to managing the quality of organizational aircraft maintenance in the Air Force by applying the concepts and tools of the relatively new concept of total quality management. He provides a blueprint for extending the quality revolution from the depots to organizational-level aircraft maintenance. The intended audience is primarily logistics and maintenance leaders in the operational major commands.

1990. 73 pages. FOUO.

R-5

Training Planning: A Need for Change

Maj Arthur R. Matson, USAF

This study examines the training planning process in systems acquisition. The author identifies problems that face Air Training Command in its participation in systems acquisition and recommends implementing an organizational proposal that will ensure that the Air Staff and the acquisition community integrate needed expertise in manpower, personnel, and training into the systems acquisition process.

1985. 114 pages. Public release.

R-20

The Impact of Materials Handling Equipment on Airlift Capabilities

Lt Col Gary B. May, USAF

This report addresses the capability of materials handling equipment (MHE) to respond to the potential demands placed against the airlift fleet. Problems in MHE management and procurement have resulted in an MHE fleet too few in numbers, too old technologically, and too subject to breakdown. The study evaluates these issues and their impact on the military airlift system.

1983. 125 pages. FOUO.

R-28

Computer-Aided Circuit Analysis in the AFLC Software Support Center

C. Wayne McNally

Computer-aided circuit analysis is based on programs run on very large-scale integrated circuits. This report considers whether this tool can be adapted for use at the working level in the Air Force.

1986. 48 pages. Public release.



R-55

**Necessary Details of Troops:
The United States Air Force
and Counterdrug Operations**

Maj William T. Nance, USAF

Major Nance provides a starting point for those who find themselves assigned to support counterdrug operations. He explains in detail which federal civilian organizations are involved in counterdrug operations, the regulations directing and governing military participation, and current military efforts.

1989. 93 pages. FOUO.

R-74

**Air Base Attack: The Promises
of Emerging Technology**

Maj Charles W. Nystrom, Jr., USAF

Whether deterring conflict or fighting and winning, the Air Force must use every capability it has today and use those capabilities emerging technology promises for tomorrow to execute its doctrine. Major Nystrom discusses the limitations of today's counterair forces, the failure of past initiatives to regain an effective air base attack capability, and the promise emerging technology holds for the twenty-first century.

1991. 75 pages. Public release.

R-12

**Operational Test and Evaluation:
The Quest for Independence**

Maj Robert E. Oertel, USAF

The procurement and cost of effective new weapon systems for the American military has been the subject of many heated debates over the last decade. This study centers on the Military Airlift Command and the recognition of some problems and concepts that may be of significant value throughout the Air Force.

1985. 114 pages. FOUO.

R-77

**Space Control and the Role of
Antisatellite Weapons**

Maj Steven R. Petersen, USAF

Major Petersen reviews the history of the USAF space doctrine and highlights its predominantly peacetime focus. His study provides a timely analysis to the evolution of space as another theater of warfare and the consequent need to develop an appropriate doctrine of space control.

1991. 136 pages. Public release.

R-39

**Acceleration of Foreign Military
Sales Resupply to Third World
Nations Involved in Counter-
insurgency Operations**

Maj Eric M. Pettersen, USAF

This report looks at the foreign military sales aspect of security assistance with a view toward accelerating delivery of US defense articles and services to support foreign military forces and to meet the objectives of our national security strategy. Major Pettersen does not address decisions to support particular countries.

1987. 81 pages. Public release.

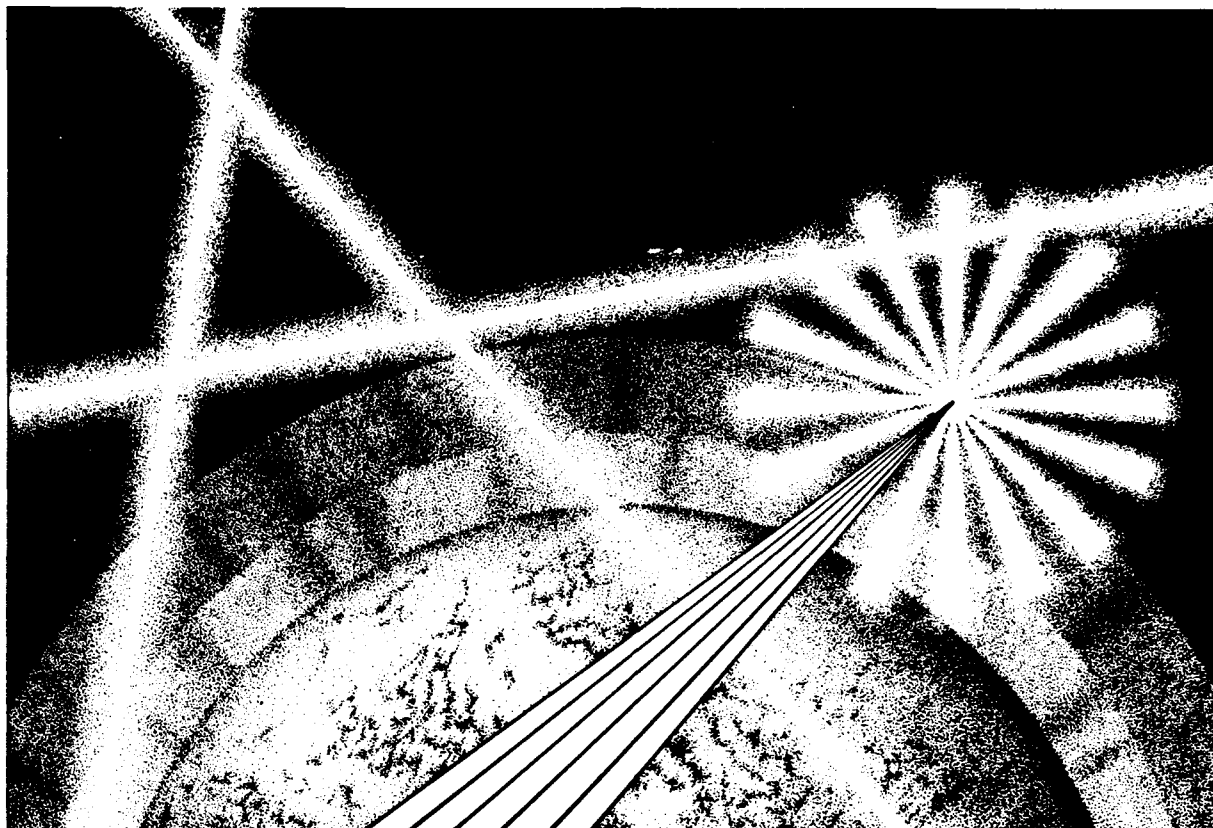
R-72

**Firepower and Follow-On Forces
Attack: Making Every Round
Count**

Lt Col Thomas G. Runge, USAF

The author presents an in-depth analysis of the Central Region's mission management system. He examines the question of employing weapons beyond the fire support coordination line with the purpose of improving the current Central Region command and control system for deep employment of weapons.

1991. 105 pages. Public release.



R-45

**Picking up the Shield:
Incorporating Defense into
Strategic Nuclear Doctrine**

Lt Col Michael G. Ruotsala, USAF

The purpose of this study is to stimulate thinking and contribute to an understanding of strategic nuclear doctrine. Colonel Ruotsala traces the evolution of this doctrine and discusses the need to incorporate defense in that doctrine.

1988. 138 pages. Public release.

R-67

**Air Force Air Refueling for Naval
Operations: History, Practice,
and Recommendations**

Lt Col Dennis K. Ryan, USAF

Colonel Ryan provides a historical review of US Air Force and Navy air refueling. He proposes a concept of operations that allows

Headquarters Strategic Air Command to coordinate between Headquarters US Air Force and the Department of the Navy. Navy and Air Force commanders can use the draft concept of operations to make decisions on the use of land-based tankers during limited attacks.

1990. 168 pages. Public release.

R-2

**A Guide to Strategic
Aircraft Basing**

Lt Col George J. Sakaldasis, USAF

This study addresses the difficult problem of basing strategic aircraft forces. It offers guidelines for Air Force action officers and decisionmakers who will be working future basing initiatives for the strategic bomber and tanker forces.

1986. 121 pages.

R-44

Computer-Assisted Wargaming for the Military Airlift Command

Maj C. Parks Schaefer, USAF

Major Schaefer develops a process that the Military Airlift Command (MAC) can use to establish its own wargaming expertise. He examines current wargaming and simulation systems with an eye to potential development for MAC purposes. The study provides a cornerstone for future MAC wargaming development and participation and ultimately proposes a method for establishing the MAC position in Air Force and joint computer-assisted wargaming activities.

1988. 140 pages. Public release.

R-73

Implementing Propensity to Stay into Scholarship Allocation Decisions

Lt Col Michael A. Schiefer, USAF

Colonel Schiefer analyzes the problem of *trying to predict which AFROTC cadets will be most likely to complete a full career in the Air Force and incorporating that propensity to stay into decisions about allocating scholarships*. He concludes that AFROTC has more pressing needs. It must find better ways to estimate the impact of policy decisions on turning out officer candidates and predicting costs factors, especially the impact of inflation on tuition.

1991. 59 pages. Public release.

R-25

Fighter Aircrew Training in the National Guard: New Dimensions, New Challenges

Col Donald W. Shepperd, ANG

This study addresses the role of Air National Guard fighter units in the Tactical Air Force and the quality of training provided ANG fighter aircrews. It reviews the growth of fighter training in the Air National Guard. Colonel Shepperd recommends the use of civilian contractor assistance to improve future training programs throughout the Guard

and the Air Force Reserve. His recommendations may also be of interest to active duty programs and foreign nations as well.

1986. 180 pages. Public release.

R-4

Air University in War: The Role of Education in Wartime

Lt Col Lawrence O. Short, USAF

This study provides a foundation to explore the best uses of Air University's unique resources during wartime. It examines the issue from three perspectives: historical, organizational, and command. It includes the perspectives of nine senior officers involved directly with Air University.

1985. 243 pages. Public release.

R-35

Small Computer Management

Maj Bernard K. Skoch, USAF

This study presents three aspects in the *development of the microcomputer: history, challenges, and solutions*. Major Skoch discusses tactical application of small computers. He examines several considerations in developing information systems architectures, beginning with a historical view of Air Force architectural efforts and concluding with recommendations for the implementation of uniform information design at base, major command, and Air Force-wide functional area levels.

1987. 109 pages. Public release.

R-65

Improved Officer Assessment, Selection, Placement, and Promotion

Lt Col Robert P. Smith, USAF

Colonel Smith points out several advantages of improved officer classification—especially during periods of difficult recruitment—and proposes enhanced Air Force classification methods. He surveys methods and instruments used for executive recruiting, clas-

sification, and placement by other services and civilian firms.

1990. 66 pages. Public release.

R-60

USAFE: A Two-Edged Sword

Maj Roger L. Smith, USAF

The author asserts that preparation for major conventional conflict is not necessarily adequate to prepare our forces for other contingencies. Major Smith examines the most likely scenarios facing USAFE and proposes command and control improvements that could enhance employment of USAFE forces in these vital operations.

1990. 99 pages. FOUO/No Contract/NOFORN.

R-30

The War Exchange: Political-Military Interaction in Developing Military Strategy

Col Gerald R. Volloy, USAF

This study examines the political-military dialogue necessary to the process of developing military strategy. Colonel Volloy intends this study as a foundation for students of military strategy to readdress mission areas where strategy development is lacking. He expects his study will serve as a complement to the curricula offered in the professional military schools and will foster dialogue between the military strategist and political

leadership regarding the effective use of military power.

1986. 72 pages. Public release.

R-33

Improving International Defense Acquisition: A Study of Problems in Initiating Overseas Contracts

Lt Col Brian Walsh, USAF

In reviewing acquisition policies and procedures that shape overseas programs, Colonel Walsh traces the causes of problems and offers recommendations that will improve the acquisition process for future programs. He focuses on the most critical phase of overseas procurement: the initiation of new contracts.

1986. 218 pages. Public release.

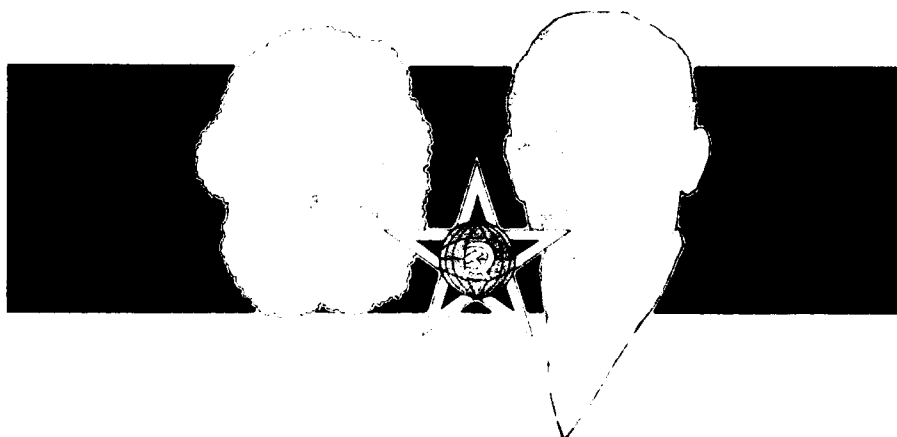
R-66

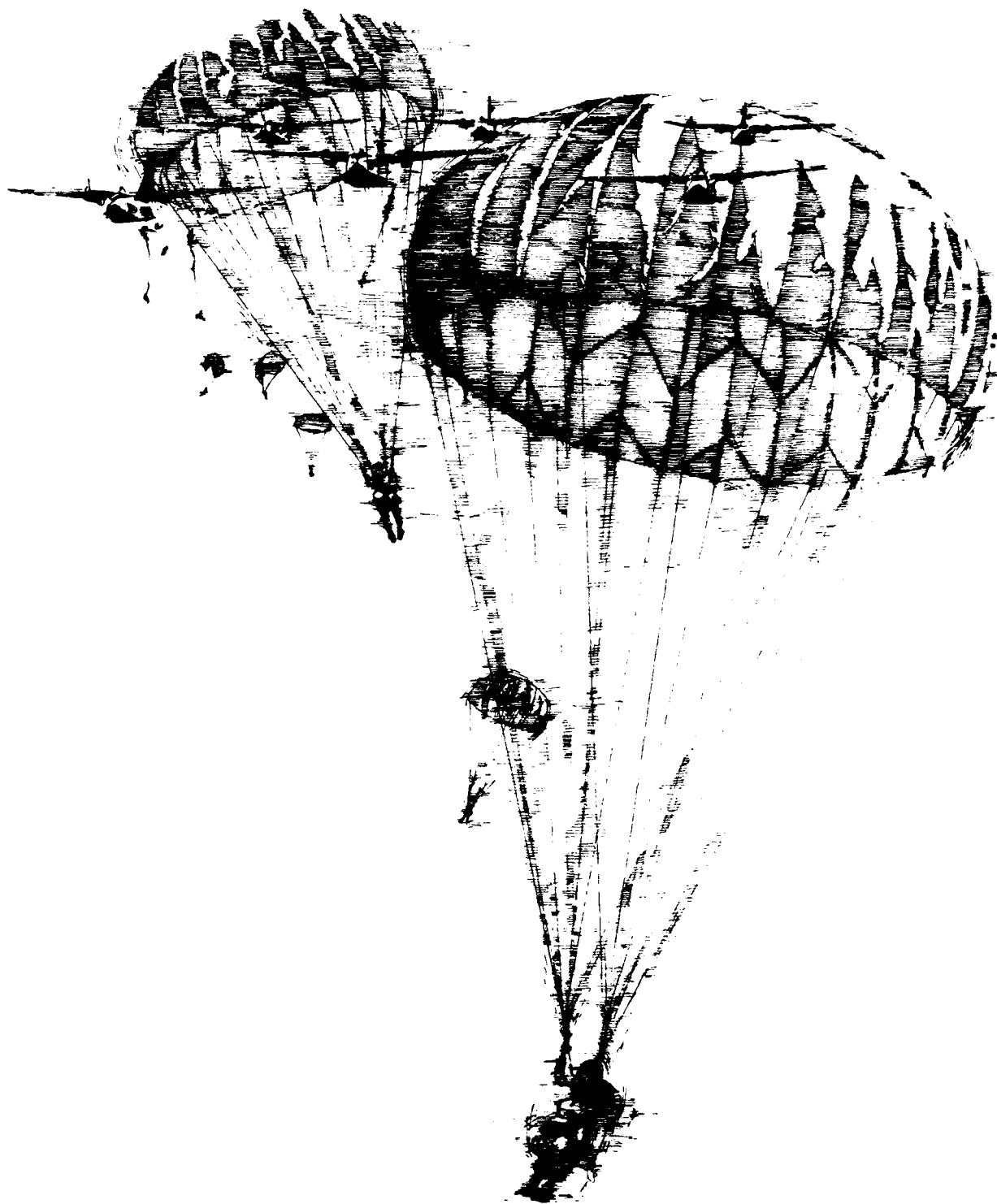
Application Controls for Computer System Integrity

Maj Randall E. Wise, USAF

Major Wise explores effective ways of implementing application controls through computer system design and documentation, as well as through the training of users and operators. He investigates specific techniques for meeting control requirements and ensuring the integrity of one of the Air Force's most valuable assets—its computerized information systems.

1990. 50 pages. Public release.





Author Index

- Albright, Dr David E.—25
Alford, Lt Col Roger W.—31

Baker, Lt Col Larry E.—31
Baucom, Lt Col Donald R.—25
Bennett, Maj Arthur L., Jr.—31
Berberian, Lt Col Archie J.—31
Bergquist, Maj Ronald E.—9
Berlan, Maj Gregory J.—31
Bingham, Lt Col Price T.—21
Blair, Lt Col David G.—31
Blank, Dr Stephen—5, 9, 21
Blow, Maj Tom—22
Blunden, Lt Col Robert J., Jr.—7, 25-26
Boasso, Lt Col Herbert J.—32
Bodenheimer, Col Clyde E.—32
Booker, Maj David L.—29
Bradley, Capt Thomas—32
Brechtel, Maj Donald D.—32
Brogdon, Lt Col Bill D.—32-33
Buchanan, Maj Thomas H.—33

Cardwell, Col Thomas A., III—5, 9
Chisholm, Maj Robert H.—33
Clifton, Col Pat O.—33
Cobb, Maj Marck R.—22
Cochran, Maj Mark A.—7
Comstock, Lt Col William P., III—33
Condit, Maj Paul D.—7
Conversino, Capt Mark J.—26
Curtis, Lt Col Thierry G.—7

Dabrowski, Maj Ronald H.—33
Daniels, Lt Col Robert E.—33
Davis, Lt Col Richard L.—9

Davis, Col Roy A.—34
Dean, Lt Col David J.—10, 22
Devilbiss, Dr M. C.—10
DiMarchi, Maj David O.—34
Donnini, Lt Col Frank P.—9-10
Dorfler, Maj Joseph F.—34
Drew, Col Dennis M.—10-11, 22

Eichhorst, Lt Col Thomas E.—34
Erickson, Lt Col Richard J.—11

Feely, Maj Edward W., Jr.—34
Fitzgerald, Maj David J.—34
Flynn, Lt Col Paul H.—34
Fox, Lt Col Daniel B.—35
Franck, Col Raymond E., Jr.—26
Frisby, Lt Col J. E.—35
Futrell, Dr Robert Frank—11-12

Gehri, Maj Suzanne Budd—23
Giermanski, Lt Col James R.—35
Godwin, Dr Paul H. B.—13
Gonzales, Lt Col Harold T., Jr.—35
Grinter, Dr Lawrence E.—23, 26

Hamblin, Maj Donald E.—36
Hamilton-Fowell, Maj Pamela A.—37
Hampton, Lt Col Richard J.—37
Heinze, Lt Col Dieter H.—37
Herrington, Lt Col Clarence O., Jr.—37
Higbee, Lt Col Edward J.—37
Hobbs, Maj Charles A.—37
Hoskins, Lt Col James A.—15
Hourclé, Lt Col Laurent R.—37

Jester, Maj William L.—38

- Johnson, Lt Col Dion W.—13
- Kavanagh, Wg Comdr Brian L.—23
- Keyes, Maj Ricky J.—38
- Keyt, Lt Col Roy A.—38-39
- Killworth, Col Michael N.—39
- Kirtland, Lt Col Michael A.—5, 13
- Kline, Dr John A.—13
- Klingaman, Jerome W.—23
- Koehrsen, Lt Col Bernal—39
- Kuhlo, Lt Col Robert C.—39
- Leary, Lt Comdr David Allan—23-24
- Lee, Lt Col Jerry N.—39
- Lewallen, Maj Eric—39
- Ludwig, Maj Carol E.—40
- Lupton, Lt Col David E.—13
- Magyar, Dr Karl P.—26
- Mann, Lt Col Greg A.—40
- Martens, Lt Col James D.—40
- Martin, Maj David C.—40
- Mason, Lt Col Henry M.—40
- Matson, Maj Arthur R.—40
- May, Lt Col Gary B.—41
- McLean, Lt Col Brian W.—5
- McNally, C. Wayne—41
- Mets, Dr David R.—13, 27
- Miller, Lt Col Charles E.—14
- Moulton, Maj John R., II—27
- Mrozek, Dr Donald J.—14
- Murray, Dr Williamson—14
- Myers, Maj Grover E.—14, 24, 35
- Nance, Maj William T.—42
- Newton, Maj Richard D.—27
- Noetzel, Maj Jonathan C.—7-8
- Nystrom, Maj Charles W., Jr.—42
- Oertel, Maj Robert E.—42
- Orr, Maj George E.—14
- Papp, Dr Daniel S.—15
- Patterson, Col Douglas A.—15
- Petersen, Maj Steven R.—42
- Pettersen, Maj Eric M.—42
- Pfaltzgraff, Dr Robert L., Jr.—5-6
- Prowse, Lt Col Michael J.—8
- Remnek, Dr Richard B.—24
- Reule, Lt Col Fred J.—15, 24
- Rhineland, John B.—16
- Roth, Lt Col R. Theodore—28
- Runge, Lt Col Thomas G.—42
- Ruotsala, Lt Col Michael G.—43
- Ryan, Lt Col Dennis K.—43
- Sakaldasis, Lt Col George J.—43
- Schaefer, Maj C. Parks—44
- Schiefer, Lt Col Michael A.—44
- Seiler, Capt George J.—16
- Shepperd, Col Donald W.—44
- Short, Lt Col Lawrence O.—44
- Shultz, Dr Richard H., Jr.—5-6
- Skoch, Maj Bernard K.—44
- Skorupa, Lt Col John A.—16
- Sloan, Dr Stephen—16, 24
- Smith, Lt Col Robert P.—44-45
- Smith, Maj Roger L.—45
- Snow, Dr Donald M.—10-11, 28-29
- Spangler, Dr Stanley E.—17
- Stokes, Maj Richard W., Jr.—17
- Sundberg, Col Eric E.—28-29
- Szafranski, Col Richard—28-29
- Tilford, Dr Earl H., Jr.—17
- Trest, Warren A.—29

United States Strategic Bombing
Surveys—17

Ventresca, Col Rudolph—17

Vollmar, Lt Col V. Frank—8

Volloy, Col Gerald R.—45

Walsh, Lt Col Brian—45

Ware, Dr Lewis B.—17-18, 24, 29

Watts, Lt Col Barry D.—18

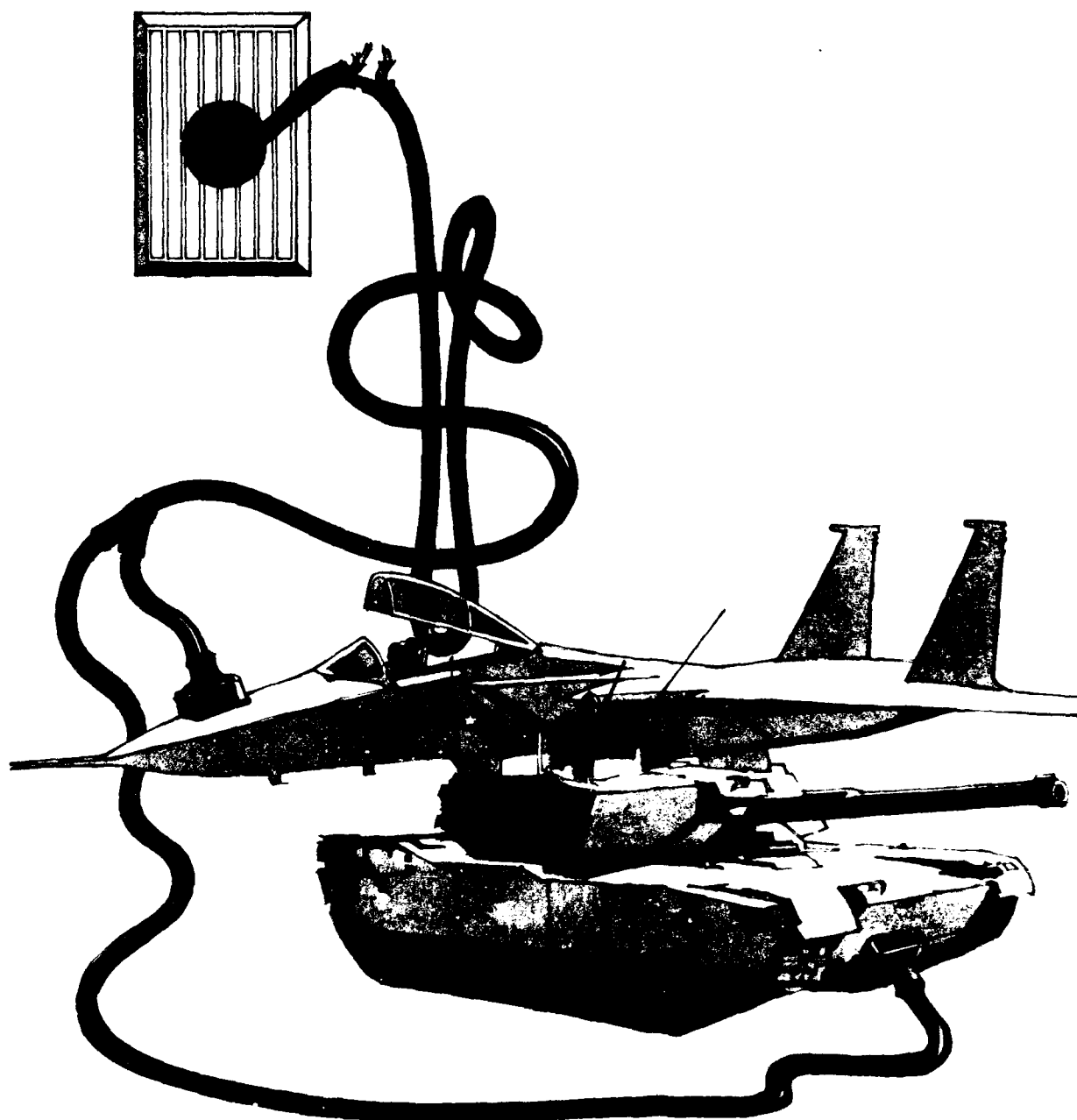
Wenker, Col Kenneth H.—18

Werrell, Dr Kenneth P.—18

Westenhoff, Lt Col Charles M.—19

Wise, Maj Randall E.—45

Wooten, Col Randall E.—28-29



Title Index

- Acceleration of Foreign Military Sales Re-supply to Third World Nations Involved in Counterinsurgency Operations: 42
- Aerial Refueling: 22
- Aerospace Power: 14
- AFOSI—Meeting Its Protective Security Mission in the Face of Contemporary Terrorism: 37
- Africa's Realignment and America's Strategic Interests in the Postcontainment Era: 26
- Air Base Attack: 42
- Air Base Security: 40
- Air Force Air Refueling for Naval Operations: 43
- Air Force Audit Agency Management Information System: 37
- The Air Force, Conscription, and the All-Volunteer Force: 15
- The Air Force Role in Low-Intensity Conflict: 10
- Airland Combat: 5
- Airlift Doctrine: 14
- Air National Guard Fighters in Europe: 38
- Air Power and the Defeat of a Warsaw Pact Offensive: 21
- Air Power and the Ground War in Vietnam: 14
- Air Power in Small Wars: 22
- Airpower Journal Index: 5
- Air University in War: 44
- Air University Review Index: 13
- An Analysis of the Air Force Computer Security Program: 40
- An Analysis of Trusted Computer Evaluation and Certification: 39
- ANZUS in Revision: 10
- Application Controls for Computer System Integrity: 45
- Archie, Flak, AAA, and SAM: 18
- Artificial Intelligence: 33
- Attacking Ships: 39
- Bear Tracks in Indochina: 13
- Beating International Terrorism: 16
- The Branch Point Study: 34
- Building a Consensus toward Space: 16
- Building Blocks in Space: 40
- The Changing Western Alliance in the South Pacific: 23
- Checking Six Is Not Enough: 27
- The Chinese Communist Armed Forces: 13
- Clausewitz on Space War: 25
- Cockpit Resource Management: 38
- Combat Operations C³I: 14
- Command of the Aerospace: 31
- Command Structure for Theater Warfare: 9
- Computer-Aided Circuit Analysis in the AFLC Software Support Center: 41
- Computer-Assisted Wargaming for the Military Airlift Command: 44
- A Conceptual Design for a Model to Meet the Wargaming Needs of the Major Commands of the United States Air Force: 35
- Conflict, Culture, and History: 5
- The Conventional Bomber Force War-Horses for Global Conflicts: 8
- Cost-Performance Choices in Post-Cold-War Weapon Systems: 26
- Countering Terrorism in the Late 1980s and the 1990s: 24
- Defending against a Space Blockade: 22
- Deployment and Automated Technical Order Support: 37
- Dynamic Stability: 15
- The Eagle's Talons: 11
- East Asia and the United States into the Twenty-first Century: 26

- Effectiveness of the MILSATCOM Requirements Process: 34
- The Effect of Higher Education Variables on Cadet Performance during 1987 Light Aircraft Training: 31
- Environmental Law for the Air Force: 37
- Ethics in the US Air Force: 18
- The Evolution of the Cruise Missile: 18
- Fighter Aircrew Training in the National Guard: 44
- Firepower and Follow-On Forces Attack: 42
- Force and Accommodation in World Politics: 17
- Forward Offense: 31
- The Foundations of US Air Doctrine: 18
- The Functions and Structure of Nuclear Deterrence in the Post-Cold-War World: 28-29
- The Future of Air Power in the Aftermath of the Gulf War: 5
- GEO, LEO, and the Future: 29
- Ground Maneuver and Air Interdiction in the Operational Art: 21
- A Guide to Strategic Aircraft Basing: 43
- High Technology Troubleshooter: 34
- Ideas, Concepts, Doctrine: 11-12
- The Impact of Decreased Department of Defense Spending on Employment in the United States: 28
- The Impact of Materials Handling Equipment on Airlift Capabilities: 41
- Impact of New Technology Weapons on SAC Conventional Air Operations: 32
- Implementing Propensity to Stay into Scholarship Allocation Decisions: 44
- Improved Officer Assessment, Selection, Placement, and Promotion: 44-45
- Improving International Defense Acquisition: 45
- Innovation in the Strategic Air Command: 37
- Insurgency and Counterinsurgency: 22
- Intelligence Support to Operations: 32
- International Competitiveness: 33
- The International Dimension of Culture and Conflict: 21
- Joint Training for Night Air Warfare: 5
- Land-Based Air Power in Third-World Crises: 13
- LANTIRN Operational Training for the F-15E and F-16C/D: 31
- Legitimate Use of Military Force against State-Sponsored International Terrorism: 11
- Low-Intensity Conflict and Modern Technology: 10
- Low-Intensity Conflict in the Third World: 18
- Making Strategy: 10
- Managing the Career Trainer Track in the Air Training Command: 34
- Marlborough's Ghost: 22
- Military Airlift: 34
- Military Air Power: 19
- Military Art and the American Tradition: 22
- Military Unity and National Policy: 29
- More for Less—An Arms Control Strategy for the 1990s: 28-29
- Necessary Details of Troops: 42
- A New Distribution Priority System: 36
- Nuclear Winter and National Security: 10
- Nuclear Winter—Asymmetrical Problems and Unilateral Solutions: 24
- Operational Art and Aircraft Runway Requirements: 21
- Operational Test and Evaluation: 42
- Optimizing the Post-START US Strategic Nuclear Force Mix: 23-24
- Organizational Structure for Air National Guard Tactical Aircraft Maintenance: 17
- Personality: 34
- Picking up the Shield: 43

- Policy and Strategy Foundations for Low-Intensity Warfare: 23
- A Possible Fallback Counteroffensive Option in a European War: 24
- Preserving the Lambent Flame: 17
- Prevalence of Careerism among US Air Force Officers: 31
- Price Competition in Weapons Production: 37
- Principles of Information Resource Management: 7
- Professional Military Education for Air Force Officers: 9
- Project Control: 22
- Quality Flight-Line Maintenance: 40
- Realities of Revolutionary Violence in Southeast Asia: 23
- Recruiting Resource Redistribution: 38
- Reinventing the Wheel: 27
- Responding to Low-Intensity Conflict Challenges: 9
- Return of the Strategic Minuteman: 31
- A Review of the Communications-Electronics Work-Load Management System: 33
- Role of Air Force Special Operations in Foreign Internal Defense: 27
- The Role of Airpower in the Iran-Iraq War: 9
- The Role of Simulation in Operational Test and Evaluation: 40
- Rolling Thunder 1965: 22
- Self-Protective Measures to Enhance Airlift Operations in Hostile Environments: 16
- Setup: 17
- The Silent Call-up Option: 39
- A SIOP for *Perestroika*?: 28-29
- Small Computer Management: 44
- Some Alternative Futures and Their Military Implications: 25
- Some Observations on Islamic Revolution: 24
- Soviet Policies toward the Developing World during the 1980s: 15
- Space Control and the Role of Antisatellite Weapons: 42
- On Space Warfare—A Space Power Doctrine: 13
- On Space Warfare—Military Strategy for Space Operations: 33
- Speaking Effectively: 13
- Special Operations: 7
- Strategic Defense Initiative Battle Management: 34
- Strategic Forces in Transition: 35
- Strategic Nuclear Force Requirements and Issues: 16
- Strategy for Defeat: 14
- Studying Soviet Low-Intensity Conflicts: 21
- Study War Once More: 23
- Subcontracting Management: 32
- Support the Troops! Paying Our People in Hostile Forward Areas: 32-33
- The Swords of Armageddon: 26
- Tactical Air Command Antiterrorism Program: 33
- The Tactical Air Control System: 33
- Tactical Air Support of Ground Forces in the Future: 35
- Tailoring the Tactical Air Control System for Contingencies: 7
- Tailoring the Tactical Air Control System for Smaller-Scale Contingencies: 25-26
- Theater Nuclear Forces and Extended Deterrence in a Multipolar World: 29
- Threats to US Security in a Postcontainment World: 25
- Total Quality Management: 8
- Toward a Healthier Aeromedical Operation: 39
- Toward an American Political-Military Policy for the Middle East in the Twenty-first Century: 29
- Training of Special Agent IMAs Assigned to the Air Force Office of Special Investigations: 35

- Training Planning: 40
- Tunisia in the Post-Bourguiba Era: 17-18
- United States Air Force Emergency Service Teams and Hostage Negotiations: 39
- The United States Strategic Bombing Surveys: 17
- Unit-Level Automation for Air Force Contingency Operations in Low-Intensity Conflict: 7
- USAFE—A Two-Edged Sword: 45
- The US Air Force after Vietnam: 14
- The Use of Air Power in Joint Maritime Operations: 32
- The War Exchange: 45
- Wartime Air Traffic Control: 37
- At War with the Soviets: 26
- When It's Over "Over There": 7
- Women and Military Service: 10



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